Major Energy Users Inc.

Australian Energy Markets Commission

Review of Distribution Reliability Outcomes and Standards

Comments on the Draft Report – NSW Workstream

Submission by

The Major Energy Users Inc

June 2012

Assistance in preparing this submission by the Major Energy Users Inc (MEU) was provided by Headberry Partners Pty Ltd and Bob Lim & Co Pty Ltd.

This project was part funded by the Consumer Advocacy Panel (www.advocacypanel.com.au) as part of its grants process for consumer advocacy and research projects for the benefit of consumers of electricity and natural gas.

TABLE OF CONTENTS

Executive Summary

The Major Energy Users Inc (MEU) supports the AEMC's efforts at reviewing the distribution reliability outcomes and standards in New South Wales. Like the NSW Government, the MEU has particular concerns about the impact of network expenditure on energy bills in NSW.

The MEU makes a number of observations in respect of the draft report:

- We consider that the setting of reliability standards needs to be made in conjunction with the decision to set allowed costs for their achievement and not independently as is the current practice.

- Analysis of the NSW DNSP capex (and opex) claims, allowed and actually incurred, does not support the public claims by NSW DNSPs that capex increases have been made to maintain reliability and to replace ageing assets – by far the largest use of capex has been for augmentation projects and nor for improving reliability.

- The calculated Value of Customer Reliability for NSW is surprisingly high because it is based on the worst case scenario and reflects costs which might apply if the loss of supply was at the most critical time – accordingly the benefits of higher reliability and the impact of lower reliability can be overstated.

- The selection of survey respondents on willingness to pay needs care and should fully reflect the population of consumers and not be over represented by those well served or those with significant supply problems

- We consider that the outcomes of all four scenarios show quite definitively that the current reliability standards are too high as increasing the standards does not deliver a better outcome and reducing the standards provides a clear benefit. This shows that the current reliability standards are imposing unnecessary costs on consumers

- We support (in general) the conclusion drawn from the four scenarios that the benefits from changing the standards are modest when measured on an individual residence basis which in aggregate use perhaps 25% of all electricity. What is not made clear in the report is that the benefits to larger consumers would be much greater and reducing the standards would offer an opportunity to alleviate some of the existing cost/price pressures they face from the recent massive increases in network costs.

Overall, the MEU considers that the AEMC draft report has its limitations. The MEU has highlighted some issues that have not been fully explored in the draft report and considers that these should be included so that there is more balance in the report.

The MEU considers that there is a case for the licence conditions to be removed in their entirety following the practice used in some other jurisdictions. The removal of these will be balanced by the AER imposing a Service Target Performance Incentive scheme (STPIS) which should be based on the actual performance achieved. The MEU considers that the service performance targets should be continually increased over time so that overall performance is enhanced. The rewards earned by the NSPs can be used to incentivise even better performance in the future. The capex and opex needed to maintain the performance standards would be set from external and historical benchmark performance so as to ensure that the allowances provided are efficient.

1. Introduction

The Major Energy Users Inc (MEU) welcomes the opportunity to provide its views on the AEMC's Draft Report on Review of Distribution Reliability Outcomes and Standards – NSW Workstream.

The MEU intends also to participate in the future work on the national distribution reliability standards.

1.1 Electricity costs in general

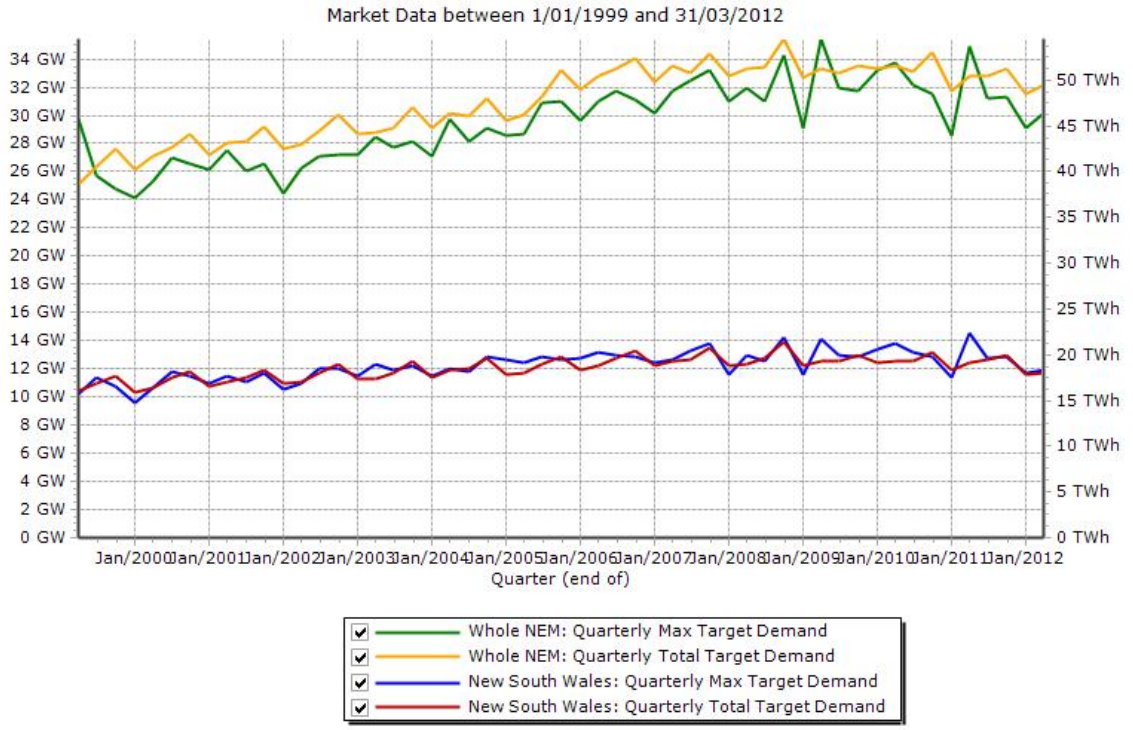
In its response to the Issues Paper on this topic, the MEU highlighted that the review was appropriate given that electricity consumers have experienced probably the highest electricity price increases over a considerable period of time seen in Australia. These price increases have been driven by a number of different causes but one outstanding issue that has led to unreasonably high prices has been the massive increase in network costs.

Whilst a significant element of the network price increases have resulted from unbalanced network pricing rules, the separation of the setting of reliability standards by governments from the setting the costs for networks by the energy regulator, has had a significant impact on the cost of the network service. On the one hand governments have been imposing increasing levels of supply reliability on network providers without understanding or appreciating what the impact has been on the cost of providing a network to meet these standards.

Another interesting feature of the electricity market has been the thrust of governments to reduce the amount of carbon emissions. To this end, there has been significant pressure on electricity consumers to reduce their consumption of electricity and there has been a general flattening of electricity consumption across the NEM as a result.

At the same time, the higher value of the Australian dollar has made purchasing electricity driven machines more viable, especially refrigerative air conditioning. This increased penetration of large electric driven household machinery has increased the demand for electricity supplies. Recent years have seen quite a rapid increase in demand which is not matched by a similar increase in consumption. However, since the global financial crisis the rate of increase in demand has reduced and the ever increasing prices being charged for network services has effectively embedded this trend. The imposition of a price on carbon emissions is likely to reinforce a trend of flat (or even reducing) demand and consumption.

The following chart (provided by NEM Review using AEMO data) shows that the NEM wide trend growth in peak demand is flattening and consumption is falling. The tracking of these two indicators for NSW shows that growth in peak demand and growth in consumption has been almost flat since 2008.



This outcome is not unexpected when it is considered that the costs for electricity have been rising by so much – ultimately costs pressures must lead to a lesser use of electricity. The fact that the reductions have been so modest when compared to the price rises reinforces the generally held view that there is little price elasticity in electricity supplies.

To a degree the cost increases have coincided with a general maintenance of reliability, leading to the inevitable question as to why costs have increased yet reliability has not done so the same extent for the same. The answer to this question is in part addressed in the AEMC draft report which highlights that there are significant costs to achieve marginal improvements in reliability and significant savings to be made out of marginal reductions in reliability. This observation implies that reliability of the existing networks is well above the cost/benefit breakeven point.

1.2 An overview of reliability as seen by consumers

The MEU noted in its response to the Issues paper that consumers see reliability in terms of the entire supply chain. It also noted that reliability in the wholesale supply of electricity and transmission is very high compared to reliability in the distribution networks. Recognition of this leads to the conclusion that reliability in distribution networks needs greater attention than reliability elsewhere in the supply chain.

The MEU also noted that there is considerable variability in the reliability across networks, with some consumers receiving considerably less reliability in their supplies compared to consumers in the same class in other areas of networks. This means that despite paying the same tariffs, some consumers get considerably less reliability for the same price. This observation raises two aspects

1. Greater attention is needed to fix less reliable elements of the networks and the method of averaging performance tends to mute these less well performing supplies
2. Polling of consumers can lead to biased outcomes depending on where in the network the consumer is. A consumer receiving highly reliable supplies is more likely to consider there is no need to pay for improved reliability yet someone in a poorly served area will consider paying more for better reliability.

This overview highlights that whilst actual reliability in distribution networks might not have changed in recent times consumers have seen increased costs due to improved reliability in the other elements.

1.3 A general overview of the impact of distribution reliability

The MEU also noted in its response to the Issues Paper that the setting of reliability standards needs to be made in conjunction with the decision to set allowed costs for their achievement as it is totally inappropriate for reliability standards to be set independently of the costs associated with achieving them.

This aspect has not been addressed as the AEMC draft report makes continued reference to the standards the NSW government might set. For minimum standards to be set without reference to the costs involved does not provide the efficiency that is inherent in the electricity rules.

Te economic regulator has the responsibility to provide adequate funds for ensuring reliability. It also implements a program for incentivising improvements in reliability (for example the AER's STPIS). For the AER not to be involved in balancing the costs of the minimum reliability standards does not provide the essential balancing of cost/benefit

1.4 Actual NSW DNSP reliability performance

In its response to the Issues Paper, the MEU provided the following tables (7.4 and 7.5) from its November 2008 draft decision relating to the capex to be granted to the NSW DNSPs.

Table 7.4 NSW DRP licence conditions – average reliability standards- SAIDI minutes per customer, by feeder type

	2005–06	2006–07	2007–08	2008–09	2009–10	From 2010–11	Actual performance 2006–07
EnergyAustralia							
CBD	60	57	54	51	48	45	13
Urban	90	88	86	84	82	80	78
Short-rural	400	380	360	340	320	300	290
Long rural	900	860	820	780	740	700	1093
Integral Energy							
Urban	90	88	86	84	82	80	66
Short-rural	300	300	300	300	300	300	175
Long rural	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Country Energy							
Urban	140	137	134	131	128	125	114
Short-rural	340	332	324	316	308	300	239
Long rural	750	740	730	720	710	700	497

Source: NSW DRP licence conditions; DNSP annual reports.

Table7.5 DRP licence conditions – average reliability standards- SAIFI interruptions per customer, by feeder type

	2005–06	2006–07	2007–08	2008–09	2009–10	From 2010–11	Actual performance 2006–07
EnergyAustralia							
CBD	0.35	0.34	0.33	0.32	0.31	0.30	0.17
Urban	1.30	1.28	1.26	1.24	1.22	1.20	0.96
Short-rural	4.40	4.20	3.90	3.70	3.40	3.20	2.76
Long rural	8.50	8.00	7.50	7.00	6.50	6.00	5.64
Integral Energy							
Urban	1.30	1.28	1.26	1.24	1.22	1.20	0.90
Short-rural	2.80	2.80	2.80	2.80	2.80	2.80	2.00
Long rural	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Country Energy							
Urban	2.00	1.96	1.92	1.88	1.84	1.80	1.36
Short-rural	3.30	3.24	3.18	3.12	3.06	3.00	2.47
Long rural	5.00	4.90	4.80	4.70	4.60	4.50	3.82

Source: NSW DRP licence conditions; DNSP annual reports.

The AEMC draft report notes that the DNSPs had provided considerably greater reliability than the minimum standards. The draft report notes that there has been considerable increase in capex allowances for the NSW DNSPs in the most recent revenue reset review which followed on from significant increases in the period before. Consistently the publicly stated reasons for this capex increase have been to maintain reliability and to replace ageing assets (which is also related to reliability).

Analysis of the actual capex (and opex) claimed, allowed and actually used, does not support this contention. Although the draft report does consider the increases in capex allowed, it does not segment this into the actual uses. MEU analysis indicates that by far the largest use of capex has been for augmentation projects and not for improving reliability.

Instead the AEMC draft report relies heavily on the Nuttall Consulting report in quantifying the costs provided by the DNSPs and makes little use of the actual allowances made by the AER in capex and opex associated with increasing and decreasing reliability.

Again, as with the NSW government making decisions without understanding the costs, the AEMC continues this practice without referencing the actual allowances for this task provided by the AER which underpin the costs consumers actually see. This issue is of further importance because consumers have seen that in many cases the allowances in the regulated revenue for meeting or exceeding the reliability standards have not been used. Despite this under-utilisation of allowances, reliability has been seen to improve!

The MEU considers that the AEMC draft report must make reference to the actual performance of the DNSPs and relate this to the amounts of capex and opex they actually used for improving reliability.

2. MEU Issues with the draft report

The MEU has a number of concerns with the draft report.

The first of these are included in the introduction section where the MEU sees that the continuation of the practice of a government setting reliability standards in the absence of the cost of achievement is economically flawed.

However the MEU has other concerns as well.

2.1 The calculation of the VCR

In its response to the Issues Paper, the MEU highlighted its concerns with the proposed methodology of calculation the value of customer reliability. The AEMC did commission Oakley Greenwood to seek values for this parameter and the report from them indicates that the value of customer reliability is higher than the value used by AEMO in Victoria by some 50%.

The MEU was surprised at this new value and reviewed the Oakley Greenwood report in some detail. What this revealed was a view from the consultant that the value calculated was a worst case and reflected costs that might apply if the loss of supply was at a critical time. There was little analysis to normalise this to reflect costs that might be incurred when seen across the entire time spectrum.

This point is particularly important as the VCR calculation was heavily biased upwards as a result of the value reported for small business. The large majority of small business does not operate continuously, but usually for normal business hours extended for some overtime. Normal business hours use only 25% of the time in a week, and even if these are extended to 50%, there is still a considerable period of time when the loss of supply will have a minimal impact on the business. A similar view applies in the case of residential users of power, where for considerable periods of time, the loss of supply has almost no impact.

Whilst Oakley Greenwood carried out a brief examination as to why small business in NSW had such a high value compared to Victoria, it did not discuss why there was a substantial difference between the country DNSP and the Sydney centric DNSPs for small business and medium/large business.

The MEU is concerned that by using inflated values of customer reliability, the benefits of higher reliability and the impact of lower reliability will be overstated. To address this issue a sensitivity analysis should be part of the development of the value of customer reliability calculations.

The MEU notes that the VCR values for medium to large businesses varies considerably between the values calculated for the two Sydney centric DNSPs compared to that for country NSW businesses where the calculation shows that

medium to large businesses in country NSW have a VCR four times that of the Sydney centric networks.

Intuitively, the MEU sees that the VCR for the Sydney centric DNSPs is probably more reflective of actuality as it is more closely equivalent to the calculation of the Value of Lost Load (now called market price cap) used for the wholesale market. Whilst there is comparability for the VCR for residential users across all three DNSPs and for all VCRs calculated for the Sydney centric DNSPs, the calculations for country NSW are the reverse to those seen in the other two DNSP regions.

2.2 Willingness to pay, willingness to accept

The MEU is aware that there is a large difference between the value of customer reliability and the willingness of consumers to pay for increased reliability. The AEMC draft report has indicated that although the AEMC sees there is a difference between the two, for the purposes of their assessment they consider there is some commonality.

Willingness to pay needs to be assessed in light of a number of criteria, of which the foremost is an ability to pay. The MEU members have advised that under the considerable price pressures they are under as export exposed businesses, the cost of improved reliability needs to be assessed in terms of the current reliability actually seen. This same cost pressure seen by export exposed businesses is also reflected in the concerns the MEU has observed from representatives of the community sector, where they are commenting that the price of electricity is now so high that decisions have to be made between paying utilities or paying for other staples, but not both. Obviously, in cases like this, marginal improvements in reliability would be very low on the agenda of such consumers and even a small reduction in cost for a modest reduction in reliability might be preferable.

Members also point out that their employees also assess the current reliability as the benchmark for whether they are prepared to pay more for marginal improvements. Those who currently receive high reliability are much less likely to be prepared to pay for improved supplies but those on feeders with poor reliability would be much more prepared to pay for improvement. This highlights the need to ensure that the selection of those to provide input needs to be fully represented of the entire population of consumers and not be over-represented by those well served or those with significant problems. As with the valuation of customer reliability, sensitivity analyses are needed to highlight the potential of any bias.

Despite these observations, the MEU sees the AEMC decision to investigate more fully the “willingness to pay” element of the cost of customer reliability for the national review, should be supported.

2.3 Trade off between lower reliability and risk

The AER has introduced a service performance incentive program (STPIS) which rewards the NSP for better than benchmark performance and a penalty for lower performance than benchmark. This introduces some risk and reward against provision of service. Despite this, the NSW government has imposed some minimum performance standards which the NSPs use to support their claim for increases in capex and opex, despite out performing the minimum standards.

To a large degree this approach is duplicative. Using historic performance, the AER sets standards for service delivery which are higher than the minimum standards set by government and against this sets rewards and penalties. A failure to meet the minimum standards has the potential for a loss of licence yet in practice such a threat is hollow, because the removal of a licence would be a significant undertaking and expose consumers to even greater risk of non-supply.

In contrast, the AER approach of “stick and carrot” has the greater potential for ensuring appropriate service delivery. This is the approach used in Victoria which pioneered the service performance incentive program. The outcome of this approach is that the service performance in all DNSPs exceeds the minimum levels stipulated and now that a service performance incentive scheme is now to be implemented in NSW at the next regulatory reset, this should supersede the use of minimum standards.

This raises the basic question as to why there is a need for the setting of minimum standards. The MEU is of the view that an incentive approach is more likely to deliver the sought after outcomes than by government unilaterally setting minimum standards.

With this in mind, the MEU is intrigued that the AEMC has not considered the option of recommending to the NSW government that should rescind the setting of minimum standards (like has occurred in other jurisdictions) and leave this aspect to the AER to implement through their service performance incentive program.

2.4 The AEMC quantitative analysis

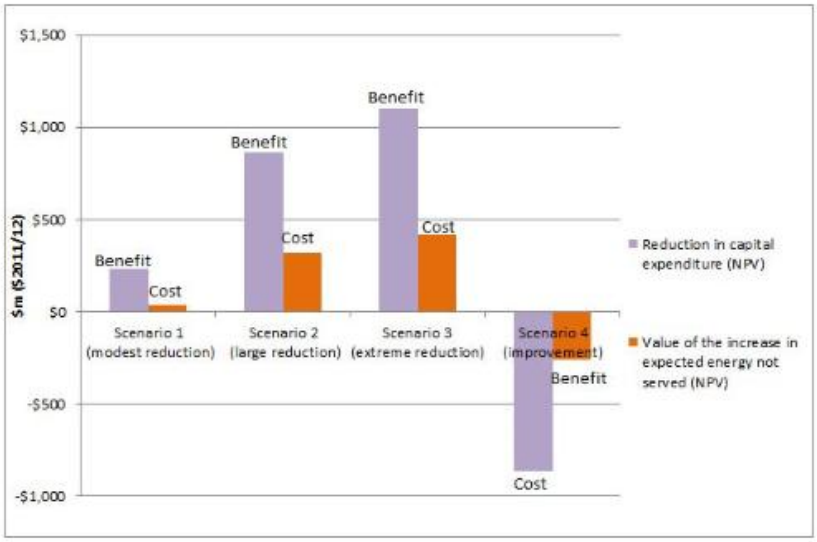
The AEMC draft report addresses reliability cost and benefit against four scenarios – a modest reduction in standards, a large reduction, and extreme reduction and modest increase. Against each scenario the DNSPs forecast the changes in the variables of opex, capex, unserved energy and average SAIDI and SAIFI. Nuttall reviewed the input provided and commented that the data provided was reasonable considering the timeframe the DNSPs had to provide the information.

From the work by Oakley Greenwood, the AEMC identified values for customer reliability and used these to quantify the benefits/detriments resulting from the changes in unserved energy and in SAIDI and SAIFI.

Whilst the MEU might have its reservations (which are noted above) it agrees with the AEMC that comparison of the costs/savings and benefits/detriments from these inputs should provide a high level view of the cost/benefit of changes.

Across NSW the outcomes of the AEMC analysis shows that changing the reliability standards will impact consumers positively on a cost/benefit basis as figure 5.42 in the draft report shows.

Figure 5.42 Comparison of the change in capital expenditure and expected energy not served by scenario: 2014/15 to 2028/29



Across all DNSPs reducing the standards will benefit consumers under all three scenarios and in the medium and long term assessments. The scenario of increasing standards is only warranted in Ausgrid region and not in the other two and the degree of benefit for increasing the standards in Ausgrid region is modest at best.

The AEMC then relates the benefits to consumers under each scenario to the cost impact on a typical residential bill.

The data can be summarised in the following table

Impact on NSW consumers	Medium term		Long term	
	cost	benefit	cost	benefit
Modest reduction	$8m	$112m	$37m	$231m
Large reduction	$76m	$312m	$321m	$866m
Extreme reduction	$110m	$429m	$415m	$1,096
Modest increase	$467m	$114m	$867m	$258m

The AEMC draft report then relates the cost savings to a typical residential electricity bill which show that at most, a saving of no more than $32 per residence might be achieved. From this quantification, the AEMC has drawn the conclusion that there is little benefit in changing the reliability standards.

However, the MEU sees that other conclusions can be drawn.

Firstly, there is a clear case that the current minimum standards are overstated and are causing consumers considerable cost for the benefit they provide. Unfortunately the comparisons made in the draft report do not examine the relative impact on the capex and opex programs for achieving the minimum reliability standards.

Secondly, the AEMC has assumed that as the benefit to each residence is so modest, there is little reason to change the standards. This approach is grossly distortive as residences consume perhaps 25% of all electricity used. The benefits to larger consumers would be much greater and perhaps would alleviate some of the cost and price pressures they are currently experiencing

Thirdly, the quantification implies that the setting of reliability standards has little impact on the electricity tariffs. This is in direct contrast to the assertions made by NSPs that maintenance of reliability is a critical cost element in their claims to the AER at times of revenue resets.

2.5 MEU conclusions

The AEMC draft report has its limitations and most of these are clarified in the report. The MEU has highlighted some issues that have not been fully explored in the draft report and considers that these should be included so that there is more balance in the report.

The MEU considers that there is a case for the licence conditions to be removed in their entirety following the practice used in some other jurisdictions. The removal of these will be balanced by the AER imposing a Service Target Performance Incentive scheme (STPIS) which should be based on the actual performance achieved. The MEU considers that the service performance targets should be continually increased over time so that overall performance is enhanced. The rewards earned by the NSPs can be used to incentivise even better performance in the future. The capex and opex needed to maintain the

performance standards would be set from external and historical benchmark performance so as to ensure that the allowances provided are efficient.

3. Responses to AEMC questions

Chapter	#	AEMC question	MEU response
3	**1a**	**What discount rate should be used in converting capital expenditure and the value of expected energy not served to net present values?**	The AER uses the calculated WACC to generate a smoothed revenue change with time and this is appropriate. The MEU considers that both the capex and the cost of USE need to be brought to an NPV basis in order to be consistent. The same discount rate should be used otherwise the outcomes will be skewed. There is an assumption that the VCR varies over time, yet VCR values used in jurisdiction than Victoria tend to use a constant value or one escalated with an external escalation adjustment factor (eg CPI)
	1b	**Should any other sensitivities be undertaken to test the bounds of our cost-benefit assessment?**	Yes. There is considerable doubt about the high value put on VCR so this should be tested for sensitivity on a range of values from the value used through a NSW value based on the Victorian VCR to a VCR based on recasting the VCR for small business to reflect a much larger non use period of (say) 50% as commented on in section 2.1. History has shown that generally NSPs use less capex than is allowed in a revenue reset. Therefore carrying out sensitivities on the capex calculated by DNSPs should be carried out. The USE and SAIDI outcomes calculated by the DNSPs should be tested for sensitivity as these are calculated outcomes based on input assumptions
4	**2**	**Are there any implications from the NSW VCR survey methodology we have used that we should take into account in considering the survey results??**	See comments in section 2.1

5	**3a**	**Should any further changes to the AEMC's proposed scenarios be considered? If so, what changes should be considered?**	The MEU considers that the four scenarios posed are adequate for the purpose
	3b	**Are there any additional impacts associated with the AEMC's proposed scenarios which should be taken into account? For example, this could include impacts which may have been difficult to model by the DNSPs?**	These could be tested through the sensitivity analyses
	3c	**Should the definition of a "major event day" in the NSW licence conditions be aligned to the definition used in the AER's reporting framework?**	Yes. The MEU considers that the government set minimum standards should be superseded and the AER STPIS used. Consistency of assumptions is essential for true comparisons to be made
6	**4a**	**Are there any other implementation considerations that should be taken into account in relation to the AEMC's scenarios for distribution reliability in NSW?**	The MEU has made a number of suggestions and comments about the testing of the reliability. The MEU considers that if its commentary is implemented there is no need for more work than would result