09 August 2013

positive energy

Mr John Pierce
Chairman
Australian Energy Market Commission
Level 5, 201 Elizabeth Street
Sydney NSW 2000

Dear Mr Pierce

Energex's response to AEMC Consultation Paper - Review of National Frameworks for Transmission and Distribution Reliability - 12 July 2013

Energex welcomes the opportunity to respond to the Consultation Paper, and supports the key principles of the Review as outlined by the AEMC.

Over the last 10 years, Energex has made significant improvement to the level of reliability seen by its customers. Energex strongly supports regulatory mechanisms that deliver stable and predictable reliability trajectories over a long period of time, and avoid "boom / bust" investment cycles that appear to be characteristic of recent times.

The reliability experienced by customers, particularly in Queensland, is stochastic in nature and highly influenced by weather patterns experienced in the state. However, underpinning this performance over a longer period is what we have termed "network resilience". This is the product of sustained operations, maintenance and planning policies implemented over a long period of time. Whilst some changes in reliability can be made in the short to medium term (e.g. increasing or decreasing tree trimming programs and varying staffing levels in response to weather events), it is planning policies which determine the resilience in the long term. Sustained under-investment results in unacceptably low resilience which takes considerable time and costs to improve, and can result in unnecessary and unacceptable electricity price volatility.

It should be noted that while the focus on security standards is primarily aimed at the sub-transmission network, the majority of outages which contribute to network performance occur at the distribution and reticulation level.

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Energex believes that there are a number of salient points that should be considered in this Review namely:

- Stakeholder Perception of Reliability is Contextual and Variable;
- Limitations of Value of Customer Reliability framework;
- Aggregate Risk needs to be monitored and influence regulatory outcomes; and
- The need for concise and consistent reporting.

Details of these points are outlined in **Attachment 1** which also provides Energex's response to the specific questions raised by the AEMC.

In particular, Energex would like emphasise to the Commission that it is currently well advanced in preparations of expenditure proposals for the 2015-20 regulatory control period. The proposed timeline outlined in Figure 5.3 of the consultation paper, notwithstanding some concerns over the adequacy of certain components of this, suggests a lead time of 35 months prior to NSP submission of their regulatory proposal. Clearly, this lead time has passed and will not be achievable in Energex's case.

Given that Energex has recently been the subject of a number of independent reviews[1] which have made explicit recommendations on Energex's reliability standards, and the proposed national approach in its entirety cannot form the basis for Energex's 2015-20 regulatory determination, jurisdictional arrangements would need to be considered.

Energex looks forward to further participating in this AEMC review.

Yours sincerely

Kevin Kehl
Executive General Manager
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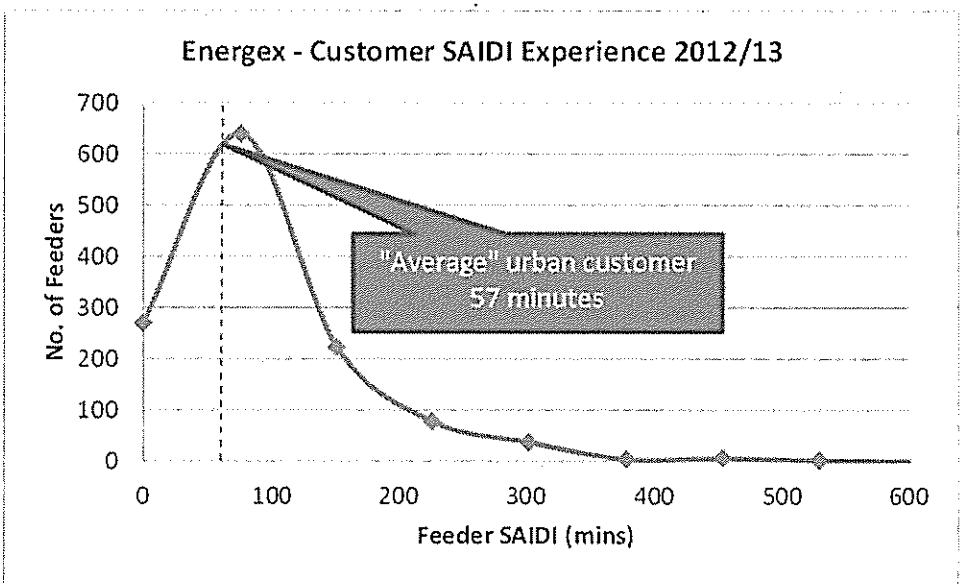
[1] Including the Electricity Network Capital Program (ENCAP) Review 2011 and the Independent Review Panel (IRP) on Network Costs 2014.

Stakeholder Perception of Reliability is Contextual and Variable

The Consultation paper, appropriately, places considerable emphasis on stakeholder consultation, and the establishment of a "representative" set of customers.

> *"Each body which is responsible for running each of the consultation processes would also need to ensure they undertake consultation with a representative set of customers in each NSP's network."*[1]

Figure 1 demonstrates the variability in SAIDI minutes (at an 11kV feeder level) that Energex's Urban customers achieved in 2012/13.



In 2012/13, 62% of urban customers experienced better than average SAIDI, whilst only 4.5% of customers experienced a SAIDI within +/- 10% of the group average. A significant notable factor is that whilst the shape of this distribution remains relatively constant from year to year, the position of individual feeders (hence customers) changes significantly. Thus, the same customer may have changing perspectives depending on recent experiences. It is also our observation that customer perception of reliability is as much influenced by their experience with the call centre (in relation to quality of information on outage and restoration time) during the interruption, as the interruption itself.

Thus, determination of a "representative view" provides significant challenges in survey methodology, sample selection and analysis. This requires considerable scoping, engagement of external expertise, and time to interpret. The three months allowed in Figure 5.3 for Steps 1, 2 and 3 is, in Energex's view, inadequate for the scope of works required.

Given its complexity, Energex is of the view that the outcomes of such a process on any particular occurrence only provide part of the reliability picture. Other factors including previous survey results, level of reliability complaints and peer comparisons (nationally and internationally) should also be considered to develop a balanced view on what constitutes an appropriate reliability setting for a particular NSP.

[1] Review of the national frameworks for transmission and distribution reliability - Consultation Paper, p 37.

Limitations of Value of Customer Reliability Framework

The key issue with the adoption of value of customer reliability (VCR) is the management of "high impact, low probability" (HILP) events. A set of "safety net" criteria is required to ensure that such events are given considerations in the assessment framework.

The Consultation Paper, appropriately, places emphasis on mechanisms for the reliable establishment of the VCR within jurisdictions. However, VCR is only one input to the economic analysis underpinning reliability based planning. Other key factors include:

- failure probabilities;
- time to repair – particularly in underground systems, or where particularly high capacity or unusual plant items have been installed;
- the potential for "collateral" damage – i.e. – the full extent of damage arising from a failure is often difficult to predict;
- the cost of alternatives, including any "reactive" cost premium – i.e the cost premium associated with emergency repair over planned replacement should a failure occur; and
- the likelihood and consequence of 2nd contingencies during extended repair periods.

From an economic perspective, multiplication of an even modest quantum of "Customer Value at Risk" by a probability of failure (usually a low number) will result at best in a "low to modest" outcome. However, should the failure occur (particularly in critical areas like central business districts or major shopping centres), the impact would extend beyond individual customers and manifests itself on the community. In these circumstances, the extent of contingency planning would need to consider such an outcome and assign appropriate "value" commensurate with the potential impact. In some cases, the consequences may in fact be too great, and a sub optimal economic outcome may be prudent.

It is also important to note that the VCR study does not take into account the additional operational costs involved in ensuring continuous supply during maintenance and project works due to increased network loads.

The Consultation Paper provides no information on the detailed application of the economic criteria, and in particular how consistency (to the extent that it is relevant) can be achieved both between NSPs, and between NSPs, the AER and the economic advisors involved in the process. In addition, it is important that due consideration be given to the balance of short term objectives and long term consequences for network resilience and price stability. A high level of skills and experience is necessary to work through the complexity of these issues and hence, a cautious approach to the full implementation of the revised arrangement is required.

Aggregate Risk must be monitored and influence regulatory outcomes

The "run down" or "build up" of network resilience, which feeds into long term reliability outcomes, extends well beyond a single five year regulatory period. In establishing the program of work, NSPs must have the ability to set the trajectory of key measures such as Energy at Risk and Customer Value at Risk, both raw (i.e. before application of failure probabilities) and expected (after application of failure probabilities). The regulatory process must be capable of taking into account the NSP's long term objectives in managing risk trajectories. This will require a horizon that extends well beyond one regulatory determination.

Adoption of a risk-based approach will lead to increased levels of utilisation, resulting in higher operational risks. The regulatory framework must recognise that these risks need to be efficiently and prudently managed through alternative solutions such as use of demand side management options.

Reporting Requirements

Whilst reliability outcomes in any one year are important, the key indicator of effective network management is the long term trend in key measures, and their consistency with the risk trajectory being implemented by the NSP. Such reporting should be as consistent and simple as possible.

Continual changes and variation in reporting methods, including issues such as exclusions methodology, planned vs. non-planned and inclusion / exclusion of customer initiated faults could distract from the validity of comparison and long term trend analysis. It is important that these issues be resolved in this national review and a stable reporting platform be established and maintained.

Subject to no significant changes in measurement methodology, this reporting framework could be implemented through the annual RIN to the AER.

Energex is not convinced of the need for "*additional compliance obligations under the national framework for distribution reliability*" set out in Box 10.1 of the Consultation Paper. From a cost and resource perspective alone, Energex can see no justification for the annual audit given that the annual RIN is already subject to a rigorous audit requirement. The current regulatory process is founded on an exhaustive determination process every five years, with transparent annual reporting. If there is a need for greater transparency on particular aspects of reliability, this should be integrated into the RIN reporting framework, rather than through a standalone process.

Question 1 Expression of distribution reliability targets	(a) Does the proposed removal of input planning standards for distribution networks compromise the ability to deal with high impact low probability events such as city wide supply interruptions?	Energex believes there is a need to distinguish between removal of input planning standards from a regulatory perspective, and continued implementation of planning and planning standards within DNSP's. SAIDI and SAIFI are backward looking measures, whereas the resilience of the network changes slowly – both positively and negatively. Energex is of the view that standard setting / economic regulation will need to be cognisant of the use by DNSP's of measures such as the trajectory of Unserved Energy and Customer Value at Risk, both "raw" and "expected" in setting their investment policies. Therefore, some guidance on planning standards is required within NSPs as a reference point for conducting economic analysis. Such reference points provide a "safety net" for major transmission / sub-transmission assets applying to major load centres.
	(b) Does the expression of distribution reliability measures by feeder type accommodate the specific locational characteristics of individual jurisdictions while achieving the benefits of national consistency?	The broad classification of CBD / Urban / Short Rural and Long Rural is adequate from a reporting perspective. The establishment of a standard set of reporting measures across NEM jurisdictions should not preclude supplementary reporting by individual NSPs at a company / jurisdictional level to maintain historical perspectives or jurisdictional needs.
	(c) Is it possible to achieve consistency in the definitions of distribution reliability measures across the NEM, including consistency in exclusion criteria?	Energex is of the view that consistency should be achievable in the definitions of reliability measures in the NEM, with some common understanding of inclusion or exclusion matters (e.g. planned outages[2]). There should be consideration in adopting the internationally recognised Major Event Day methodology such as 2.5 Beta, while recognising that it may not be valid for all NSPs.
	(d) Is the AER the appropriate body to be responsible for developing the national reference?	In the event that the AER is appointed as the standard setter, it is important that transparent and clear linkages between this role and the AER's roles as the economic regulator be articulated.

[2] Unlike other jurisdictions, Minimum Service Standards in Queensland includes planned and unplanned outages.

Question 2 Expression of transmission reliability standards	(a) What would be the effect of expressing transmission reliability standards on an N-x basis and complementing this with the inclusion of additional parameters?	No Comment
	(b) Is AEMO the appropriate body to be responsible for developing the national reference standard template for transmission? If not, which body should be responsible for this task?	No Comment
Question 3 Structure of the standard setting process	(a) Is the proposed timeframe for undertaking the standard setting process able to be achieved in practice?	Energex is concerned that the three month allowance for "Customer Consultation", "Development of reliability scenarios" and "Reliability scenario selection" is too short in the context of the complexity of determining a "statistically valid" sample of customers that is in fact representative of the customer base – presumably by feeder category. The diversity of individual experiences that contribute to a defensible "representative" will require considerable expert involvement, field surveying and statistical analysis. Insufficient time has been allowed for this step (i.e. customer consultation). A process that commences 48 months prior to the start of a regulatory period is more adequate to undertake the complex analysis required for this critical issue. Similarly, publication of the standards at T-26 provides only seven months lead time to the timing for the submission of the Regulatory Proposal (T-19). Energex is of the view that this is also inadequate time to prepare and finalise (including finalisation of governance processes) the five year regulatory proposal.
	(b) Are there any specific jurisdictional arrangements that would need to be considered in adopting the proposed frameworks, including how the responsibilities could be allocated?	It needs to be recognised that the current Minimum Service Standards (MSS) applicable in Queensland and STPIS are statistically quite different. MSS targets are set with an expectation of (circa) 1 in 10 year probability of exceedance, whereas STPIS is set at approximately the expected average level likely to be exceeded 1 year in two.

Question 4 Development of guidelines and the VCR	(a) Which aspects of the proposed frameworks should be covered in the economic assessment process guidelines?	Whilst the Consultation Paper focusses heavily on the determination of VCR, it is largely silent on other key aspects required for the economic evaluation of project options including failure probability, time to repair, second order contingencies, evaluation timeframes, discount rates etc. These issues become quite complex for underground transmission, sub-transmission and distribution networks, and in networks with very large single asset capacities. It is Energex's view that guidelines are required to ensure that a comparatively consistent approach is adopted across NSPs. The Guidelines for Reliability Assessment Planning produced by the Electricity Supply Association of Australia in April 1995 comprehensively dealt with these issues and can be largely adopted, subject to update of costs information.
	(b) Is the AER the appropriate body to develop the guidelines, in light of its other roles under the proposed frameworks? If not, which body should be responsible for this task?	Energex supports the AER's engagement. In so doing, the AER needs to ensure consistency in the VCR values used for different purposes such as STPIS and reliability target setting.
	(c) Is the AER the appropriate body to be responsible for updates to the VCR? If not, which body should be responsible for this task? Should the CPI be used to escalate VCRs each year?	Energex does not object to the AER fulfilling this role and supports the application of CPI on an annual basis. Given the complexity of this issue, the AER should implement a screening process to determine if a "reset" of the VCR is required even on a five yearly basis. Changes in VCR value should be gradual in nature given the long planning horizons characteristic of networks. This may necessitate smooth transitions from the results of one review to another.
Question 5 Customer consultation and selection of reliability scenarios	(a) How should the customer consultation process be conducted to provide sufficient information to the standard setter to make an informed decision on the selection of a range of reliability scenarios?	As outlined, selection of a representative sample of customer views is quite complex due to the variability of experiences both between customers on the same feeder category, and for the same customer in different years. The consultative process should have a sound statistical basis to ensure a "representative" view is developed, and is not influenced by recent customers' experiences. Consistent to the approach advocated for VCR, there should be a screening process conducted prior to each major review to determine if a full reset is justified.

	(b) Should limits or constraints be placed on the discretion that the standard setter has regarding the selection of reliability scenarios?	Whilst Energex supports a five yearly review of the reliability scenarios, the process could be improved through a screening test to determine if a "reset" of the reliability targets is required based on customers satisfaction with the reliability performance. Given the long lead times to significantly impact the underlying resilience of the networks (positively or negatively), Energex is of the view that the scenarios should be evolutionary rather than revolutionary in nature.
	(c) Should the evaluation of measures to address worst served customers for DNSPs be included in the economic assessment process?	Energex supports the proposition that programs should be put in place with the objective of improving reliability for worst served customers. Whilst some of these programs may not be cost justified, they should still be considered by the AER as prudent expenditure. However, a floor should be established (based on a multiple of average performance) where feeders no longer classify as "worst performing" - i.e. it is theoretically possible to not have worst performing feeders in a regulatory sense.
Question 6 Economic assessment of reliability scenarios	a) What are likely to be the main costs and resource implications for NSPs, economic advisers, and other stakeholders from the economic assessment process?	Customer consultation, assessment of reliability scenarios and the standards setting process will all require additional resources during the three year lead up to the regulatory proposal. Ultimately, reliability outcomes come down to individual capital and operating expenditure programs which must be scoped and costed. This will increase the need for planning resources to conduct an economic assessment of all projects with identifiable energy at risk over the planning horizon, as well as a greater consideration of the reliability impacts of changes in operating expenditure. The overlay of an economic test on planning decisions increases complexity that will require a longer time for completion.
	b) What are the main risks associated with the economic assessment process? Is the use of sensitivities during the economic assessment process likely to address risks around the uncertainty of key assumptions?	Reliability outcomes, particularly in the short term, are stochastic in nature. There is a danger of an overstatement of the strength of the linkage between pricing outcomes and reliability expectations. Whilst this can be managed in part by sensitivities, customer perceptions of reliability can often change quickly. Energex experienced this effect in early 2004, when a series of storms quickly altered the public perception of reliability performance. Thus, caution needs to be taken in establishing the direct causal relationship between economic decisions and reliability outcomes.

Question 7 Setting reliability standards and targets	Does the Commission's proposed approach provide sufficient information to the jurisdictional minister to allow the minister to make an informed decision on the levels of reliability that appropriately meets community expectations?	Subject to details of implementation, Energex agrees that the process should support this outcome.
Question 8 Links between the standard setting process and the revenue determination process	(a) Should NSPs be required to align the consultation process at the commencement of the standard setting process with their consultation process on their regulatory proposal? Is this feasible and what costs or benefits may arise under this approach?	The paper proposed that consultation commences 35 months prior to NSP submission of their regulatory proposal. As this timeframe is not achievable for Energex's forthcoming regulatory determination, a transitionary arrangement to continue under the current process may be required. Otherwise the timing of consultation processes should be aligned. Special challenges (see body of report) may make Reliability Consultation very specialised in nature, resulting in few cost economies in combining processes.
	(b) What factors should the AER consider in taking into account any differences in the cost forecasts submitted during the standard setting process and in a NSP's regulatory proposal?	Demand forecast is a key driver in capital expenditure costs and any changes in demand forecast will affect the costs forecast. Costs generally change as time progresses and further design development work and scope refinement is completed. Costs are likely to change during development of the regulatory submission.
Question 9 Updating reliability standards and targets within the regulatory control period	(a) Are the Commission's proposed criteria for when an update can be sought appropriate for TNSPs and DNSPs, noting the differing characteristics of these networks?	Energex has no objection to the "off ramp" provisions outlined.
	(b) Do the Commission's proposed criteria represent a sufficiently high materiality threshold for updates?	Energex has no objection to the materiality thresholds proposed.
	(c) Would the proposed mechanism affect the incentives for efficient investment that exist under incentives based ex ante revenue allowances?	Provided the mechanism primarily relates to exogenous triggers, the mechanism should not interfere with the incentives under the ex-ante revenue allowances.

Question 10 Compliance and performance reporting	(a) If the proposed framework for transmission reliability is adopted in Victoria, should AEMO be responsible for complying with Victorian transmission reliability standards?	No Comment.
	(b) Does there need to be any changes to the current STPIS in order to enable it to be used to promote compliance with reliability targets for DNSPs?	Energex does not support STPIS being used as a compliance measure as it was not designed for this purpose. It was developed as an incentive mechanism to ensure reliability performance meets expectations of customers.
	(c) How should independent audits of NSPs' internal processes be conducted to demonstrate that NSPs have processes in place to meet their standards and targets?	ENERGEX does not support the imposition of this additional process. Existing RIN, DAPR, RIT-D tests should be sufficient. If not, modifications to these existing processes should be made.
	(d)What issues should be considered in specifying how performance reporting should be undertaken by TNSP's and DNSP's.	Performance reporting should be streamlined with current reporting requirements and be undertaken within the existing reporting framework such as RIN and DAPR.
Question 11 Next steps and implementation	Do you have any views on the changes to the NEM regulatory architecture which may need to be made in light of the proposed frameworks?	Energex is seeking clarity on transitional issues, and is of the view that 2015-20 determination should proceed under current framework. To the maximum extent possible, the change should be implemented within the current framework, except to the extent that the reliability targets underpinning the revenue determinations are set in a different way.