

Comment on QCA Issues Paper Electricity Distribution: Service Quality

EnergyAustralia thanks the QCA for the opportunity to comment on its Service Quality Issues Paper.

This document sets out EnergyAustralia's response to the Issues Paper. In this document, comment is provided on the specific issues noted by the QCA.

3.1 Network reliability

The Authority seeks comment on:

- ***whether these five measures are appropriate*** [SAIDI, SAIFI, CAIDI, MAIFI and energy not supplied] ***and adequate measures of network reliability and whether there are likely to be any particular difficulties in reporting against these measures; and***
- ***approaches to identifying exceptionally poor service quality such as reporting on worst performing feeders or providing statistical measures of service quality variability such as standard deviation.***

The first three reliability measures proposed represent what has now become the industry standard for reporting network-wide reliability performance. However, MAIFI is an index which at this point in time, has not been accepted in NSW and does not form part of any regular reporting templates. EnergyAustralia does not presently report MAIFI.

Within EnergyAustralia, the reporting of MAIFI would not be a problem, however some rural DNSPs have indicated that the collection of such data is a very real problem, due to the location of their reclosers throughout the respective networks. Regardless, NSW DNSPs may be required to report momentary interruptions. There are some definitional issues that remain to be resolved to improve the consistency of recording. Within NSW, the DNSPs and the Jurisdictional regulator are working together, with a view to finalising these definitions by end 2000.

Within NSW, the recording of reliability measures is in the following categories, to enable a more appropriate comparison of the service the DNSP is delivering:

- Overall – which is what the customer experiences;
- Raw – removes the impact of transmission events, beyond the DNSPs control;
- Standard – further removes momentary and major natural events. This is the most appropriate measure of the maintenance and operating regime; and
- Modified – removes the effect of planned outages.

Standard definitions of the above categories of events, including “major natural event” are needed to facilitate the year on year comparison of a DNSP's performance.

The value of an “energy not supplied” statistic is questionable. The disruption to customers is not related to this single statistic, rather to the occurrence of an interruption. In any case, the energy not supplied cannot be estimated with precision and in many cases it is made up by increased consumption after the event.

Average factors such as the Value of Lost Load (VoLL) have proven to be of very limited use in establishing the need to augment the distribution network.

The separate reporting of poor reliability feeder sections is accepted as necessary to supplement average reliability statistics and help decide investment priority. In order to keep the reporting requirements to a manageable level, a threshold expressed in terms of SAIFI (as a multiple of the average value) would be preferred, although other factors such as CAIDI can be significant. In addition, the recording of customer complaints is necessary to identify areas where there may be supply difficulties.

It should be noted that distributors often have diverse territories and a standardised reliability level may not be appropriate for all customers.

3.2 Technical quality

The Authority seeks comment on:

- ***the appropriateness of including technical quality measures in service quality reporting;***
- ***whether monitoring customer feedback alone should be sufficient;***
- ***the appropriate over-voltage events to monitor, if any; and***
- ***the appropriate approach to monitoring system voltage, if included.***

It is accepted that technical service quality measures should be recorded. An approach such as that proposed by the ORG involving sample recording appears a reasonable compromise although there would need to be flexibility in the placement of recorders. This would assist in the diagnosis of customer complaints.

An issue that needs to be addressed is that DNSPs should be able to recover the associated significant costs of investment and ongoing maintenance and data management through network prices.

Monitoring customer feedback on supply quality remains the only way in which the presence of most supply quality problems would be brought to light. Supply quality surveying on a rotational basis is unlikely to capture all instances of unsatisfactory quality and give acceptable results. Where equipment is in place to monitor system voltage, this would not usually represent the voltage conditions at customers' premises.

Appendix B Table 4 lists only over voltage events in several categories. There are other supply quality issues that affect customer perceptions, including transients, under voltage and more subtle problems like harmonic distortion, phase unbalance and DC injection. Supply quality monitoring equipment will only provide detail of a sample of locations. Customer complaint would remain as the major source of information and for most events the cause will never be known with certainty. It is suggested that this Table be modified, with a reduced number of over voltage categories, provision for other quality issues and for a "cause unknown" category.

3.3 Customer service

The Authority seeks comment on:

- ***whether customer service should be monitored and if so which activities should be monitored;***
- ***the appropriateness of the data fields proposed in Appendix B – item number 5;***

- **any additional activities and data fields which should be reported and monitored; and**
- **whether the Authority should monitor the activity level of voluntary guaranteed service levels or impose a set of guaranteed service levels.**

The listed activities for monitoring are similar to those covered by NSW regulations. The Quarterly reporting frequency would be onerous.

It should be clarified that under 5.7 a request for information on quality and reliability of supply should relate to an individual customer's connection. More detailed analysis would be treated on a consultancy basis.

4 SEGMENTATION OF SERVICE QUALITY DATA

The Authority seeks comment on:

- **the need for segmentation of service quality data;**
- **appropriate categories for segmentation; and**
- **appropriate definitions of segmentation categories.**

Within EnergyAustralia, segmentation has been by service regions, which broadly relate to former constituent network territories. There is advantage in this form of segmentation for management reporting, as trends within areas of management responsibility can be monitored and this form of segmentation should therefore be retained. However, each service region is diverse in nature and it is recognised that this form of segmentation does not permit a ready comparison between DNSPs.

The Authority proposes segmentation of distribution networks into categories similar to that used by the ORG (CBD, Urban, Rural and Remote Rural). If this approach were to be adopted, a national consensus on the definition of these network categories is essential. One problem in reporting this level of detail is what constitutes the delineation between each category. The ORG definition has only one CBD area in Victoria (Melbourne). Some alternative classifications have been based on people per square km and using some definitions EnergyAustralia could have a number of CBD districts in central Sydney, the lower north shore and at Newcastle. A further difficulty in classification is that some feeders supply mixed loads.

Historically, to satisfy IPART enquiries EnergyAustralia has indicated the Maitland and Muswellbrook regions as rural and the remainder of our network as urban and this has been considered acceptable. Using small sample areas to report indices is not practical and is best kept at region or local government area level.

5.1 Possible data collection framework

The Authority seeks comment on:

- **the appropriateness of the proposed data collection framework and associated data fields;**
- **any additional data fields that should be included; and**
- **the appropriateness of the reporting periods proposed**

The reliability information proposed to be gathered by the QCA in Appendix B involves the collection of a large amount of information on a monthly basis. Monthly reporting would be very labour intensive; six monthly reporting should be adequate with monthly breakdown.

The reliability information proposed to be gathered includes detailed statistics on every HV feeder. EnergyAustralia has not reported such detailed information and it has been accepted by the jurisdictional regulator that it would be inappropriate to do so. The reporting of reliability for all 400 feeders in Victoria may not produce a very large report but EnergyAustralia alone has about 2,500 feeders and 4,000 feeder sections. In addition, many feeders in urban areas are interconnectors and their configuration changes regularly. EnergyAustralia's preference would be to provide aggregated information by segment with additional information on the worst performing feeder sections.

Information on the worst performing feeder sections should not just comprise statistics but narrative on the suspected causes and planned remedial action. This should be followed up by a narrative describing the action taken.

5.2 Implementation issues

The Authority seeks comment on:

- ***the feasibility of adopting a service quality regime based on consistent standardised data; and***
- ***where consistent standardised data is not available, what alternative measures based on proprietary data should be adopted to establish baseline measures of service quality?***

Ideally, all authorities would report in exactly the same way on the same parameters. The NSW DNSPs and their Jurisdictional regulator are working towards standardised reliability performance reporting arrangements and to the extent possible there should be a national standard.

It may take some DNSPs an extended period to comply with standardised requirements and in fact this may not be economically achievable in some cases (eg. to report MAIFI requires each circuit switch to have a cyclometer and currently requires each switch to be visited to record its operation. This would represent an additional cost, principally for rural DNSPs).

There are likely to remain some differences in performance reporting which will require interpretation in any comparison between DNSPs. The variation over time of an individual DNSP's performance, with suitable modification for weather related occurrences, will remain the most useful indicator of effectiveness.

6 SERVICE QUALITY INCENTIVE MECHANISMS

The Authority seeks comment on the most appropriate approach to incentive regulation of service quality.

The provision of shared network service is not a market-based activity. It is and will remain a regulated monopoly service. However, the regulatory regime should, to the maximum possible extent, encourage the outcomes that a contestable market would deliver.

Simplistic minimum average reliability standards are not thought appropriate, as they can lead to inappropriate development of the network. Rural portions of the network may require a very large expenditure to be upgraded to meet minimum standards which their

customers would not be prepared to fund. Minimum standards expressed in terms of an individual customer's experience are more appropriate but need to take into account the vastly different standards that apply to rural and urban networks because of their different economics.

Incentive regulation based upon customer values is strongly preferred. A development of the process now established for Victorian DNSPs by the ORG, taking into account customer value preferences, is seen as the best way for the regulatory regime to emulate a competitive market.

EnergyAustralia believes that network performance would be optimised by an appropriate incentive-based regulatory regime based upon customer values. The recent ORG Determination for Victorian Distributors contains two incentive-based performance measures¹:

- A regulatory revenue cap coefficient reflecting the ORG's perception of the costs of delivering improved reliability;
- Minimum reliability standards for end use customers backed up by monetary compensation.

EnergyAustralia endorses the overall form of the ORG's approach, but is concerned about the appropriateness of the cost related coefficients. Incentives based upon customer value, rather than costs, would provide the DNSP with the appropriate incentive to deliver the optimum level of service to customers.

¹ Electricity Distribution Price Determination 2001-05, Office of the Regulator-General, September 2000.