

15 February 2005

Mr Sebastian Roberts
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ACCC
PO Box 3548
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Dear Mr Roberts

EnergyAustralia service standard report 2004

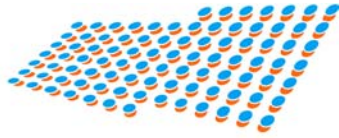
Please find enclosed the information in relation to service standard performance requested in your letter dated 10 December 2004. The statistics enclosed are based on EnergyAustralia's feeder availability (as historically recorded) for the period 1 July 2004 – 31 December 2004.

EnergyAustralia, is supportive of a service standard incentive mechanism in general. However, we strongly object to such a regime being implemented in the context of PB Associates' recommendation for significant cuts to our replacement program in the 2004-2009 period. EnergyAustralia believes it to be fundamentally inappropriate to apply targets for service standards (which have been set based on previous performance) if capital replacement projects that are necessary to maintain those same service standards have been denied by the regulator and / or its consultants. This is particularly true in the context of financial penalties or benefits being linked to performance. The issue highlights the ACCC's lack of recognition of the integrated nature of replacement capital with asset performance.

EnergyAustralia also notes that there are a number of other issues in relation to the recording of service standards that remain outstanding. EnergyAustralia has provided information to the ACCC in several submissions since release of its draft determination. Further information is also provided in the attached report which I trust will assist both parties to reach a resolution on these outstanding issues prior to the ACCC's finalisation of its revenue determination for EnergyAustralia.

Yours sincerely,

(GEORGE MALTABAROW)
Acting Managing Director



EnergyAustralia[™]

EnergyAustralia's report to

Australian Competition &
Consumer Commission

Service Standard 2004 – Audit

February 2005

Energy

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SERVICE STANDARDS REPORT

1 INTRODUCTION

The ACCC is proposing to introduce a service standard incentive regime for EnergyAustralia which would apply for the 2004-09 regulatory period. The regime is outlined in the ACCC's Draft Determination on EnergyAustralia's revenue cap which was released in April 2004. The Draft Determination has the effect of a final determination for the purposes of pricing only, and was made possible by a Code derogation which was required to provide EnergyAustralia and TransGrid with a basis upon which to set prices for 2004/05 financial year in the absence of a final determination. While Energy Australia has endeavoured to work with the ACCC in establishing a service standard framework that is relevant to our unique "meshed" transmission network, we have had concerns that some of the measures proposed by ACCC in its draft determination are impractical to apply for our business. As such, Energy Australia has not been in a position to record the additional measures in the format sought by the ACCC.

EnergyAustralia strongly objects to financial benefits and penalties being applied to a TNSP on the basis of future performance when the ability to meet the target performance level is compromised by the regulator making significant cuts to the TNSP's forecast capital program. EnergyAustralia believes that should the ACCC adopt the recommendations in the PB Associates report, our network performance will be compromised into the future and as such, it is not appropriate to use current service level targets to assess future payments.

EnergyAustralia has prepared the material in this report on the basis of our understanding of what is currently required by the ACCC, having regard to our current and past practice and the uncertainty around the issues addressed in the draft determination which are yet to be resolved.

2 ACCC TARGET SET FOR ENERGYAUSTRALIA

The ACCC set out the following requirements in the draft determination:

EnergyAustralia's financial incentive will be measured by circuit availability with the inclusions of:

- Transformers and reactive plant, in accordance with the proposed standard definition
- Significant lengths of 132kV lines and other equipment, resulting from the re-classification of some assets from distribution to transmission during the 1999-2004 regulatory period.

EnergyAustralia has also been required to record the other service standard measures as set out in the ACCC's service standard guidelines.

3 ENERGYAUSTRALIA'S SUPPORT FOR THE INCENTIVE REGIME

EnergyAustralia supports the ACCC's stated intention to link each TNSP's revenue stream to performance or service standards and believes that TNSPs should be rewarded when performance standards increase and be penalised only when performance standards decline.

Furthermore, EnergyAustralia supports the view of the ACCC's consultants for the Service Standard Guidelines, SKM, that an incentive mechanism should not be implemented until there is sufficient data to establish the right benchmarks for service standards. EnergyAustralia considers that it is not appropriate to apply industry wide benchmarks to set service targets because of the substantial differences between the networks of the different TNSPs and the diversity and complexity of their operating environments. We maintain that targets should be set based on five years of data before financial consequences are activated.

However, EnergyAustralia strongly objects to the ACCC making significant cuts to our asset replacement program and then applying a revenue penalty/benefit on the basis of the network's performance. EnergyAustralia sees the ACCC's regime as representing a "lose-lose" for networks that have their capital claims denied. The TNSP has a choice to replace assets without support of the regulator, in order to meet the service standards or, the TNSP could build the capital program as approved by the regulator, but suffer the adverse consequence of heightened risk of network failure, and the financial penalty of not meeting network performance standards. The business suffers a financial penalty in either case.

The ACCC's draft determination does not represent an agreed position between EnergyAustralia and ACCC. Subsequent to the release of the draft, EnergyAustralia has provided a significant amount of information to demonstrate to the ACCC the issues its draft determination raises.

ACCC has not made its final determination to date and has spent most of the period since the draft determination developing its new incentive based capital investment regime. Formal discussions have not been held in relation to service standards since the draft.

Given the unfinished nature of the discussions with regard to the definition and number of service standards that EnergyAustralia is required to report in 2004-09, EnergyAustralia is yet to invest in new systems to ensure compliance with the requirements of the draft because these requirements have not been finalised.

This report therefore contains data which has been collected on the same basis as it has been collected historically in order for it to be compared to the targets set by ACCC. Where possible we have also included an additional set of data that takes account of the recently transferred ACCC assets.

4 MEASURING CURRENT SERVICE STANDARDS

Transmission Circuit Availability - Feeders

EnergyAustralia does not have an automated system for tracking the availability of specific transmission or distribution assets. However, for the last few years EnergyAustralia has

¹ Section F, EnergyAustralia submission to ACCC for 2004-09 revenue cap, September 2003.

implemented a system to derive availability figures. This uses existing procedures which have been implemented for planning outages of the network and is explained below.

Network Control receives requests for outages of the 132kV System. Due to the critical nature of this network and the potential for one outage to impact another, this person has produced a spreadsheet to track the status of all the 132kV feeders.

Outage request information is manually entered into the outage planning spreadsheet and links are made to indicate other feeders which are impacted by a requested outage. A brief description of the outage detail is included with each entry. This system allows EnergyAustralia to decide at a glance whether a requested outage is acceptable.

To extract our existing availability figures, at the start of each month we use the outage planning spreadsheet to determine if transmission classified feeders have been out of service. Using this as a first test, we then use our SCADA control system to look at the load on each 132kV feeder. From the SCADA load graph we can determine to within approximately 15 minutes when a particular feeder was de-energised and re-energised. This information is put into another spreadsheet, which calculates the progressive annual availability of the listed feeders.

The process of reviewing the outage planning spreadsheet, searching the SCADA system for load details and manually entering the result in the final spreadsheet for each feeder is time consuming and must be performed monthly. The need to carry out this process monthly is driven by the period the SCADA system retains the load information.

5 MEASURING PROPOSED SERVICE STANDARDS

Transmission Circuit Availability – Transformers

EnergyAustralia has not historically measured the availability of transformers for the purposes of reporting to ACCC. EnergyAustralia believes that transformers on its transmission network typically operate independently of the feeders, and while they technically form part of the circuit, the availability of transformers often does not impact the operation of the transmission system. Of course, the operation of these transformers has a significant impact on the distribution system to which it is connected. However, this impact is picked up by the distribution service standards, which EnergyAustralia reports to IPART each year.

At present there is no process in place to record availability of transformers. EnergyAustralia has considered how it might record this information and has suggested some changes to the number of transformers for which data is recorded. Further, a variation to the service standard itself is also recommended in order to make it more meaningful. These alternate proposals are outlined in Appendix A.

Transmission Circuit Availability – Reactive Plant

EnergyAustralia does not currently record the availability of reactive plant on its transmission system. EnergyAustralia has considered how it might record this information in the future, but has again suggested variations to the measure itself which will allow us to use existing information and will provide a more meaningful measure of performance than the draft requirements outlined in the ACCC's draft determination.

A discussion of these alternatives is set out in Appendix A.

Outage Duration

EnergyAustralia does not currently record outage duration. EnergyAustralia believes that outage duration is not an appropriate measure for a meshed transmission network which is typically not impacted significantly by a single outage as electricity can almost always be delivered via an alternate path.

EnergyAustralia understands the ACCC is keen for EnergyAustralia to record at least one other measure in addition to transmission circuit availability. In place of an outage duration measure, EnergyAustralia has considered alternatives that we could record which will represent a meaningful measure of performance, and which will utilise data that the business currently records.

The alternative proposal is outlined in Appendix A.

6 PERFORMANCE

EnergyAustralia has provided the following information to ACCC regarding feeder performance. Data for the years 2000/01, 2001/02, and 2002/03 were calculated using the process described above for the assets considered to be ACCC assets as the 1999 revenue reset.

Table 1 – Transmission feeder availability - historic performance (%)

	2000/01	2001/02	2002/03	2003/04
Transmission feeders	96.55	94.60	96.30	97.40

The target set by ACCC in its draft determination for service standard performance is set out in Table 2.

Table 2 – Draft Determination – service standard performance measure

Performance measure	Unit of measurement	Revenue at risk	Collar	Dead band knee 1	Target	Dead band knee 2	Cap
Transmission circuit availability	%	1	95.3	-	96.1	-	96.7
Average outage duration	Data to be measured by EnergyAustralia during 2004-2009 regulatory period						

The performance for the 2004/05 financial year (year 1 of the determination) is 96.65%. This performance has been calculated on the basis of 6 months of data (1 July 2004 – 31 Dec 2005) as the draft determination has been in place since 1 July 2004.

It is important to note that the data previously provided to ACCC has been calculated on the basis of feeders only and only those feeders considered to be transmission assets in 1999. A significant number of additional feeders have since been classified as transmission assets and were transferred to the ACCC asset base in the 2004 draft determination.

Furthermore, EnergyAustralia has historically not excluded longer-term outages from the transmission feeder availability measure. The ACCC's draft determination states that if an outage is greater than 14 days, it should be excluded from the measure after the 14 day period.

EnergyAustralia has provided the data in two forms – the first set with only the 1999 assets included in the calculation (not curtailed at 14 days), and the second including all transmission assets as at 2004 (and curtailed at 14 days as per draft determination). This means that ACCC can compare the target, which was set on the basis of the 1999 transmission assets (with no curtailment), with performance of the same set of assets measured in a similar way. It also enables the ACCC to set new targets on the basis of the 2004 assets at some stage in the future.²

² It should be noted that for the purposes of regulatory compliance and reporting, EnergyAustralia and ACCC agreed that asset classification of transmission assets or distribution assets should remain constant for the full five-year regulatory period, regardless of the technical operation of assets. Asset classification will be assessed at the 2009 review and appropriate asset transfers will take place at that time.

Table 3 – Transmission circuit availability – ACCC assets (as at 1999) compared to ACCC assets (as at 2004)

	Old ACCC assets (1999)	New ACCC assets (2004)
Transmission feeder availability	96.65%	98.57%

6.1 Exemptions

There were four extended outages during the six month period. These are indicated in red in the attached spreadsheets (Appendix B).

EnergyAustralia has not historically excluded long term outages for feeders in the performance measures collected to date. This issue remains unresolved by ACCC and it is not clear to EnergyAustralia whether ACCC will allow these events to be capped.

Table 4 – Feeders that sustained extended outages during the period (1/7/04 - 31/12/04)

Feeder name	Duration of extended outage	Cause of outage
908/909	Almost 2 months	Cable failure
90X	17 days	Maintenance - Oil leak correction
91B/1	18 days	Maintenance - Oil leak correction
9S6/1	Almost 3 months	Reconstruction work during commissioning of Haymarket

Capping the extended outages at 14 days (336 hours) produces much better availability results for EnergyAustralia. In fact, if extended outages are capped at 14 days, EnergyAustralia performs better than the upper bound set by the ACCC in its draft determination.

Table 5 – Feeder availability for period when extended outages are capped

	Extended outages calculated in full	Extended outages capped	Upper cap for incentive
Feeder availability	96.65%	98.35%	96.7%

7 CONCLUSION

The ACCC has not released its final determination in relation to EnergyAustralia's revenue cap for the 2004-2009 period. It remains unclear what the status of the draft determination is in relation to applying an incentive regime to revenues for 2005/06 financial year on the basis of feeder performance in 2004.

EnergyAustralia strongly objects to the ACCC applying a service standard incentive mechanism in the context of significant cuts to the forecast capital program as recommended by PB Associates. This issue is particularly significant because PB has recommended large cuts to EnergyAustralia's replacement program which is likely to have a direct impact on enabling us to reach the service standard performance target. EnergyAustralia believes that there is a high probability that PB's recommendation to delay replacement expenditure will negatively impact on EnergyAustralia's network performance in the 2004-2009 period. EnergyAustralia believes that the impact for the following period (2009-2014) will be even more severe if the replacement capital is not spent as forecast.

The draft determination does not represent an agreed position between EnergyAustralia and the ACCC in relation to service standards. There has been no formal opportunity since the release of the draft determination for EnergyAustralia to discuss these outstanding issues with ACCC in order to resolve them.

EnergyAustralia has provided the information in this report in good faith and has attempted to meet the ACCC's requirements where possible. EnergyAustralia is committed to resolving the outstanding issues that have arisen since the draft determination, and in particular, is keen to discuss the impact of delay to the asset planned replacement program. In order to reach an agreed position in relation to the measures themselves, EnergyAustralia has provided alternative measures that we believe are more appropriate to our network, and are more informative in terms of demonstrating the performance of the network. EnergyAustralia hopes that the ACCC will also reconsider the replacement issue and seek to resolve the other outstanding issues with in a collaborative manner prior to release of its final determination in May 2005.

APPENDIX A – ALTERNATIVE MEASURES

EnergyAustralia has raised concerns with ACCC about the draft determination's requirement to record all the existing service standard measures outlined in the ACCC's Service Standard Guidelines.³ ACCC in turn, has indicated that it would prefer EnergyAustralia to report on more than one measure in the future and that this has been the driver behind the ACCC's requirement in its draft determination.

EnergyAustralia believes that recording all the measures outlined in the Service Standard Guidelines is not only contrary to the recommendations made by SKM who helped develop the guidelines, but many of the measures are not relevant or do not make intuitive sense for a meshed network such as EnergyAustralia's transmission network.

As a result of informal discussions with ACCC staff, EnergyAustralia has been invited to develop alternate measures that could replace one or more of the existing measures (for EnergyAustralia only). The development of new measures is consistent with the Service Standard Guidelines which state the ACCC's intention to refine and amend the existing measures in the future.

The following section sets out a number of measures that EnergyAustralia has developed. These measures are similar to those set out in the service standard guidelines but they are structured to make use of data that EnergyAustralia already has access to thereby minimising any increase in compliance costs. Furthermore, EnergyAustralia believes that these new measures provide a better picture, in terms of risk, of the impact that outages place on a meshed network.

It should be noted that EnergyAustralia is pleased to provide performance data to the ACCC, but objects to that data being used to calculate a revenue penalty (or benefit) in the context of PB Associates' recommendations for significant cuts to the forecast capex program, particularly in the area of replacement.

1 CIRCUIT AVAILABILITY

EnergyAustralia proposes that the circuit availability measure be altered so that it is weighted to provide a measure of the impact of the particular element that is out of service.

1.1 MVA days of feeder availability

EnergyAustralia proposes that it measure total number of days transmission feeders (as rated in MVA⁴) are unavailable for service:

- Where there is recall capability due to equipment defect, or

³ EnergyAustralia is not required to record inter-regional constraint data as it does not operate assets across (near) regional boundaries.

⁴ The MVA rating of a transmission feeder is taken as the average of the summer and winter ratings in MVA

- When a transmission feeder is taken out for service and is unavailable for service, due to planned work, where the recall is greater than 24 hours⁵.

After having calculated the non-availability of feeders, EnergyAustralia proposes to translate it to a measure of availability, similar to the ACCC’s existing availability measure which tends to 100%. The formula would be:

$$\left(\frac{MVA \text{ Days Availability}}{Total \text{ MVA Days}} \right) \times 100\% = MVA \text{ Days of feeder availability}$$

1.2 MVA days of “transmission bulk supply” transformers non-availability

EnergyAustralia proposes that it measure the number of days that “bulk supply” transmission transformers as rated in MVA⁶, are unavailable for service:

- Where there is no recall capability due to equipment defect; or
- When a “bulk supply” transformer is taken out for service and is unavailable for service due to planned work, where the recall is greater than 24 hours⁷.

After calculating the non-availability of transmission bulk supply of transformers, EnergyAustralia proposes to translate it to a measure of availability, in a similar manner as suggested for feeder availability.

$$\left(\frac{MVA \text{ Days Availability}}{Total \text{ MVA Days}} \right) \times 100\% = MVA \text{ Days of transformer availability}$$

1.3 MVA_r days of reactive plant non-availability

EnergyAustralia proposes that it measure the total number of days that reactive plant as rated in MVA_r are unavailable for service:

- Where there is no recall capability due to equipment defect; or
- When a transmission reactive plant is taken out of service and is unavailable for service due to planned work, where the recall is greater than 24 hours⁸.

After calculating the non-availability of transmission bulk supply of transformers, EnergyAustralia proposes to translate it to a measure of availability, in a similar manner as suggested for feeder availability.

⁵ The recall time could be made shorter to 12hours or 8 hours as deemed appropriate.

⁶ The MVA rating for a “bulk supply” transmission transformer is taken to be the nameplate rating in MVA.

⁷ The recall time could be made shorter to 12 hours or 8 hours as deemed appropriate.

⁸ The recall time could be made shorter to 12 hours or 8 hours as deemed appropriate.

$$\left(\frac{MVA \text{ Days Availability}}{Total \text{ MVA Days}} \right) \times 100\% = MVA \text{ Days of reactive plant availability}$$

2 LOSS OF SUPPLY

EnergyAustralia proposes that a loss of supply measure be applied. EnergyAustralia could measure interruption to supply as a result of a forced outage of transmission assets. This can be expressed as the number of incidents, or as a measure in terms of MVA lost load and/or in terms of duration in either minutes or hours.

3 HOURS THAT PLANNED OUTAGE PLANS WERE IN PLACE

EnergyAustralia believes that an alternate measure could utilise the load shedding plans that EnergyAustralia develops for NEMMCO for planned and unplanned outages of transmission assets. A measure could be developed to calculate the exposure of the network in the event of a second contingency. Such a measure could be recorded in terms of hours that plans were in place, as well as MVA/MWh that would have been shed in the event of a further contingency. EnergyAustralia believes that this type of measure could demonstrate the exposure within a meshed network.

4 CRITICAL DIFFERENCES BETWEEN EA AND ACCC MEASURES

4.1 Feeder measure

The current ACCC definition for circuit availability takes no account of the size or criticality of the individual feeders or the capacity of the network. The ACCC's formula simply asks for the number of hours the feeder is out of service. This does not take account of the size of the individual feeder or the relative importance of the feeder to the rest of the system. EnergyAustralia believes that by treating all feeders exactly the same, the data does not provide a view of the relative importance of the availability of particular parts of network or an accurate indication of the relative exposure to risk of load shedding that the network has borne.

EnergyAustralia suggests that feeder availability be calculated in terms of MVA and period of time over which the outage has occurred rather than hours alone. MVA allows the size of the feeder to be taken into account and provides a measure of the relative importance of that feeder for the duration of time the outage occurs.

4.2 Inclusion of planned outages where assets can be recalled

The ACCC's measure includes planned outages to the network, which in the case of a long thin network makes sense, because these planned outages usually impact reliability for customers. However, in the case of EnergyAustralia's meshed network, outages of transmission assets usually do not impact delivery of energy to customers, but instead increase the risk the network bears in the case of a further outage.

EnergyAustralia conducts more of its planned outages at times of low load – usually during shoulder seasons. The meshed nature of our network means that customers can generally continue to be supplied with the remaining elements in service. Furthermore, many of the elements that are taken out of service are able to be recalled very quickly in the case of

another contingency. Therefore, the fact that the first element was out of service does not change the outcomes for consumers.

EnergyAustralia does not believe it is appropriate that planned outages be incorporated in the service standard measures where supply to customers remains unaffected. EnergyAustralia believes that it is not appropriate that the regime that is supposed to incentivise the TNSP to improve standards, actually penalises the TNSP when such work is being carried out.

EnergyAustralia's preference is that the measures that are recorded are done so without the inclusion of outages which are taken out for maintenance purposes only at times of low load, with a recall period of less than 24 hours⁹ and which do not affect the reliability of supply to customers.

4.3 Inclusion of all transformers

The ACCC proposes that all transformers that are defined as transmission assets be considered in the availability measures. This means that some small transformers in zone substations connected to 132kV feeders, simply due to close proximity, would be included in the measures despite the fact that these transformers have a distribution purpose only and do not impact the operation of the transmission system at all.

EnergyAustralia believes inclusion of transformers with distribution functions to be unreasonable, impractical and not consistent with the effect of the same measure for other TNSPs. Furthermore, EnergyAustralia does not have systems in place at present to monitor transformer availability. Therefore, compliance with this measure will involve a manual process and should be streamlined where possible.

EnergyAustralia believes it would be beneficial to the business as well as the regulator to limit the availability measure to those elements that are critical to the transmission system or that impact in some way on the transmission system. Excluding transformers whose function is purely a distribution function would not only ensure that the measure captures the same type of assets within EnergyAustralia's network as is being captured in other transmission networks, it would also enable the critical assets to be monitored while ensuring that the process is as streamlined as possible.

⁹ The recall time could be made shorter to 12 hours or 8 hours as deemed appropriate

APPENDIX B – TRANSMISSION AVAILABILITY SPREADSHEETS

APPENDIX C – OUTAGE SPREADSHEET

APPENDIX D – EXAMPLE OF SCADA INFORMATION