

14 January 2004

Mr Sebastian Roberts
General Manager – Electricity Group
Regulatory Affairs Division
Australian Competition and Consumer Commission
PO Box 3648
Sydney NSW 2001

Dear Mr Roberts

EnergyAustralia's response to PB Associates Final Report regarding revised estimates of transmission capex for 2004-2009 period.

I would like to formally acknowledge the improvements the ACCC has made with the appointment of PB Associates as consultants to review EnergyAustralia's revised capital program. We are pleased to report that many of the concerns we raised regarding the initial review with GHD in December 2003 have been addressed and that PB conducted the review in a professional manner. The review was well targeted and had clear processes in place which allowed it to be completed within extremely tight time frames. Furthermore, it was clear that PB Associates had employed consultants with distribution experience, which ensured that questions were appropriate and limited to key areas of interest.

The report produced by PB has, in EnergyAustralia's view, delivered a reasonable synopsis of EnergyAustralia's processes and transmission projects. However, there are some significant and specific instances where EnergyAustralia believes PB has misinterpreted information that was provided to them. These areas include EnergyAustralia's replacement program in general and the refurbishment of Ourimbah sub-transmission substation in particular. EnergyAustralia is disappointed that despite further explanations provided to PB in response to their draft report, PB have not understood the significance of the risks they have introduced as a result of the recommended reductions to EnergyAustralia's replacement program.

EnergyAustralia believes that had PB had more time to consider our response, the final report may have taken better account of the risk issues outlined in our response. PB acknowledged that they did not understand how EnergyAustralia adjusted its risk criteria to take account of other factors. With more time available for their review, PB would no doubt have undertaken further analysis and sought further information from the business. This aspect of the review is disappointing.

EnergyAustralia notes that PB supported all of EnergyAustralia's proposed projects as prudent projects (including the replacement program in general and Ourimbah substation in particular), but expressed differing views in relation to the timing of these projects. While these issues are discussed in greater detail below, our key concern with the PB report is that we cannot support the increased risks that would be imposed on our business and our customers should PB's recommended 40% reduction to our replacement capital program be adopted by the ACCC.

EnergyAustralia has undertaken a significant amount of work to improve the rigour of our capital governance processes and our opex/replacement strategies. I am pleased to note that these improvements were acknowledged and supported by PB.

EnergyAustralia's replacement program

EnergyAustralia reviewed its original submission for replacement and made significant changes to the program forecast for the 2004-2009 period. The revised program was submitted to ACCC on 29 October 2004. This revision occurred as a result of better information about asset condition gained in the last two years, and better understanding and categorisation of risks associated with the aging and staged replacement of network assets.

EnergyAustralia staff explained the condition monitoring process and analysis that EnergyAustralia undertakes. While impressed with the condition information and assessments, PB appear to have misinterpreted EnergyAustralia's criteria for risk assessment. This has led to PB's conclusions that EnergyAustralia is planning to replace assets earlier than would be suggested by the condition information. This conclusion is strongly refuted by EnergyAustralia.

EnergyAustralia believes that PB's conclusion is one that can only be reached if individual asset replacement is viewed in isolation with the assumption that all other network assets are in service and in satisfactory condition. In EnergyAustralia's view, this is overly simplistic and could lead to unacceptable levels of risk for the network in the future should ACCC accept PB recommendations.

A network business, such as EnergyAustralia, has a number of considerations in addition to asset age and condition information that are taken into account in developing its replacement strategy. These factors include the desire to streamline the replacement of assets within an asset class over time for resourcing and security reasons, the restricted time frames in which work can be conducted, particularly on critical infrastructure (i.e. during shoulder season only), and resource and equipment constraints. Of primary importance is that replacement is planned strategically to ensure that required levels of replacement expenditure remain at sustainable levels and that work is carried out before equipment fails and has an unacceptable impact on network performance.

PB has not taken any of these factors into consideration in their recommendation. In fact, PB states that "...it is not clear to PB Associates how EA modifies its risk assessment outcome and on this basis (PB) do not believe it unreasonable to use the risk assessment results as the basis for arriving at a recommended level of spend."¹ EnergyAustralia strongly refutes this statement and believes that by not understanding these further factors which overlay the condition information and further shape the replacement program, PB have made recommendations to dramatically reduce EnergyAustralia's planned replacement program in the 2004-2009 that will expose EnergyAustralia's business to unacceptable levels of

¹ *EnergyAustralia's Forward (Transmission) Capital Expenditure Requirements – An Independent Review*, PB Associates, 17 December 2004, p87.

operational risk. PB have only looked at the condition information in isolation and have not understood the overlaid sophistication that EnergyAustralia has applied to develop its program.

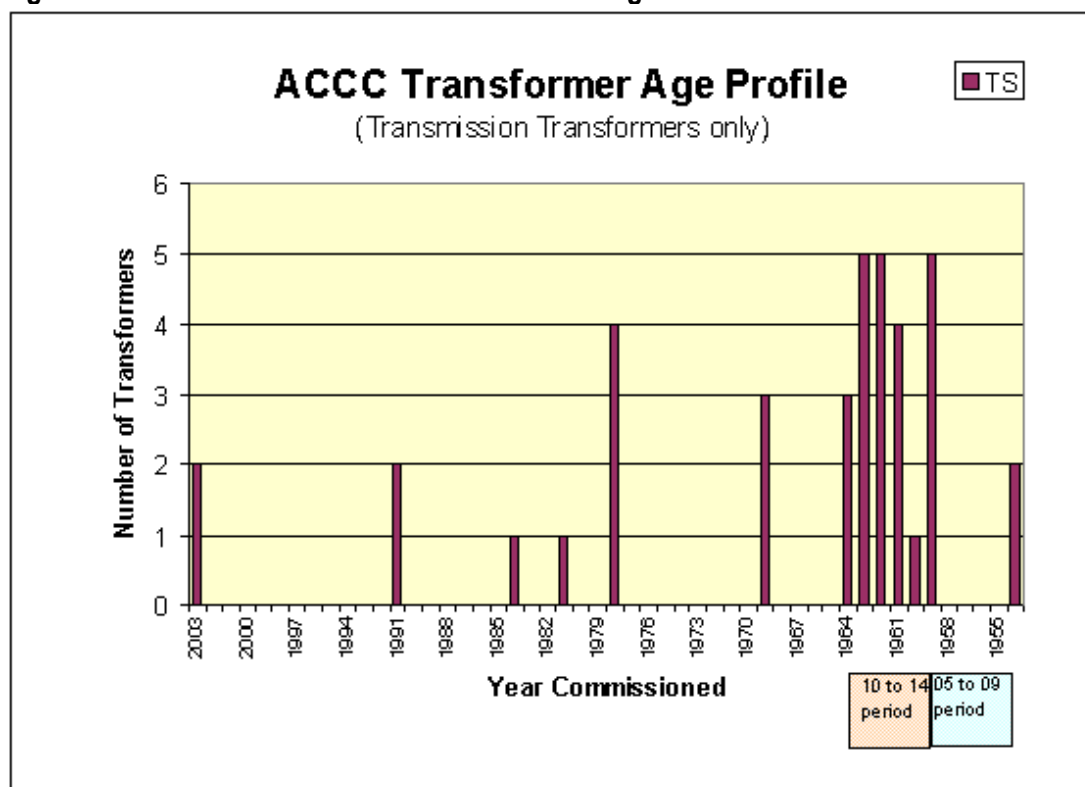
Of further concern, is PB's failure to take account of the costs involved in deferring the replacement of significant numbers of assets as per their recommendations. If assets in poor condition are not replaced, maintenance costs for those assets will necessarily increase. This increase in opex costs would need to be taken into consideration if the ACCC accepts PB's decision to defer capital replacement. EnergyAustralia has undertaken the analysis of the capex/opex trade-off in setting its replacement program. The opex allowance sought has been predicated on the replacement program being accepted. If the replacement program is significantly cut (ie by \$64.5 m as proposed by PB), additional opex in the order of \$20m would be required to cover the continued servicing of deteriorating assets. It should be noted that EnergyAustralia's proposed capex program is the optimal balance of capex/opex and is essential from a risk perspective. It should be noted that this assessment of increased opex was agreed by IPART for the distribution business where replacement capex was reduced by their consultant.

Transformer replacement

PB's recommendations for transformer replacement, if accepted by ACCC, will have significant implications for EnergyAustralia's network and the outcomes borne by EnergyAustralia's customers. For example, Figure 1 (next page) contains data which was included in the information provided to PB which shows that in the next regulatory period (2009-2014) there are more than 20 transformers that will reach their regulatory age limits. EnergyAustralia believes that it is impractical to replace over 20 sub-transmission transformers in a single regulatory period and in any case, many of these transformers have test results that indicate these units have reached the end of their regulatory lives. Therefore EnergyAustralia assessed the transformers with the poorest condition and prioritised their replacement in the 2004-2009 period. The replacement of the remaining, better performing transformers has been delayed.

If the ACCC does not allow the marginally early replacement of transformers in this period (2004-2009), EnergyAustralia's transmission network will be placed in the position of an unacceptable level of risk of equipment failure in the next regulatory period (2009-2014) as EnergyAustralia will be required to manage the replacement of **one third** of our ACCC transformer assets and the bulk of our sub-transmission transformers in a single period. This is an untenable scenario as the transmission assets are our most critical assets in terms of the performance of the EnergyAustralia network. Asset replacement experts within EnergyAustralia believe that to gain access to this many transformers in one 5 year period would lead to a deterioration in service outcomes for our customers.

Figure 1 – ACCC Sub-transmission Transformer Age Profile



A similar scenario would most certainly be the outcome if the ACCC accepts PB recommendations for the deferral of switchgear replacement. Like transformers, transmission switchgear are critical network elements, access to which is limited by loading and seasonal constraints. EnergyAustralia does not believe that it will be possible to replace all switchgear reaching its regulatory life when that occurs during the 2009-2014 period.²

It should be noted that PB praised EnergyAustralia’s use of condition information to review asset lives for network elements. In the case of transformers, this information has led to a reduction in the expected life of transformers. In light of this review, it is even more important that large numbers of critical network elements are not allowed to reach the end of their lives in a single period, but that strategic streamlining of replacement projects takes place.

Risk Methodology to Determine the level of Replacement Capital

It is clear that PB has not fully appreciated EnergyAustralia’s risk assessments and PB has reached conclusions, which EnergyAustralia believes exposes EnergyAustralia’s network, staff and customers to unacceptable levels of risk. In a number of statements made in the report, PB suggested that a risk rating of C2 is not sufficient to warrant replacement of an asset within 5 years. EnergyAustralia believes that this position is not appropriate and draws PB’s attention to

² It should be noted that condition information over-rides regulatory life as the driver for replacement. Where condition information is not available, regulatory life is used for long-term planning of replacement tasks.

the definitions applied to a C2 rated asset. The definitions (outlined below) show that a C2 category of risk can involve property damage up to \$1m and liability of up to \$10m. Furthermore, the categorisation highlights that it is possible for such an event to occur within EnergyAustralia (as it has occurred within the network on at least one previous occasion). EnergyAustralia does not believe it is appropriate that risks of this likelihood and consequence should be borne over the next 5 year period.

2	Minor	Safety	First aid required on site for minor injuries
		Environmental	Small on-site environmental event
		Reliability	Refer to reliability measures matrix
		Property Damage	\$100k - \$1m (including damage to EA assets)
		Liability Claims	\$1m - \$10m

C	Possible	Occurs within EnergyAustralia
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It should also be noted that EnergyAustralia's CRA (condition risk assessment) methodology assesses the risks and consequences of the failure of a particular asset, for that asset and nearby assets, in isolation from the rest of the system. It does not take account of the impact that the asset's failure will have on total system security. (A separate process is conducted to determine the criticality of the assets to the system). As explained by SKM's letter that has been provided to ACCC, failure within the Ourimbah 132kV switch-yard, particularly the 132kV galvanised steel busbar, or the 132kV circuit breakers, would be catastrophic to the supply to the Central Coast.

EnergyAustralia requests that ACCC also review EnergyAustralia's risk assessment guidelines which have also been provided. The guidelines clearly show the process for analysing age and condition information and clearly sets out the criteria and range of risks that EnergyAustralia typically faces.

EnergyAustralia believes this is a critical area for ACCC to understand and is therefore willing to make available relevant staff for further discussions with ACCC and its consultants, PB Associates, on these issues.

Ourimbah Substation Replacement Independent

While the points made previously are important, EnergyAustralia considers PB's recommendation to defer the replacement of the Ourimbah sub-transmission substation to be the most concerning particular as EnergyAustralia has had SKM review the need and timing of the replacement of Ourimbah. This report details the need and that the substation must be replaced. In EnergyAustralia's view, PB has not fully understood the key drivers or the variety of the factors influencing the timing of this project. The main driver for the timing of this project is the remaining life assigned to the 132kV CBs, CTs and protection equipment, all of which have been assigned a remaining life of five years. Once this trigger is reached and all other equipment within the substation is nearing its end of life, EnergyAustralia believes it is more efficient to replace the substation rather than undertake a piecemeal approach to maintaining aging assets. EnergyAustralia considers that such an approach would ultimately involve higher

costs and higher risks. EnergyAustralia believes the triggers that are driving Ourimbah's replacement will require the project to be completed prior to PB suggested timeframe of 2011.

Allocation methodology

In the assessment of the forecast IT capital spend for the 2004-2009 period PB has accepted the full quantum of IT spending claimed by EnergyAustralia as being prudent. However, PB questions the basis for allocating the costs to the transmission and distribution businesses, and suggests a different basis for the allocation of costs associated with both the outage management system and the billing and metering system should be used.

The allocation basis for costs that cannot be attributed directly to a specific asset is undertaken at a high level using the ratio of distribution and transmission system assets. This high level approximation was agreed to by IPART and ACCC prior to IPART's finalisation of its distribution price determination in May 2004. EnergyAustralia acknowledges that in some cases, particularly those highlighted by PB – outage management and billing and metering systems – that a more accurate basis for allocation could have been used. While the further separation of EnergyAustralia's transmission business (including the establishment of separate IT systems) would have alleviated concerns over cost allocation, there would be no net public benefit in doing so.³

However, EnergyAustralia believes that the time for discussing and changing the allocation basis for non-direct costs has passed. This is due to the fact that the IPART price determination was finalised in June 2004 and is not able to be reopened for the purpose of adjusting the allocation basis for joint costs. EnergyAustralia will work with ACCC in the lead up to the next review to determine the most appropriate allocation methodology for non-direct costs.

Deliverability

PB made passing comments about EnergyAustralia's ability to deliver its large forecast capex program. Whilst this issue was raised in interviews with EnergyAustralia staff during the review the discussions were held at a high level only. It was explained that there had already been a significant increase in capital projects undertaken during the last regulatory period and whilst the proposed capital programs represented a further increase it should be seen in the context of recent activity. This issue was not explored in any detail with EnergyAustralia staff. EnergyAustralia has instigated a number of programs to ensure it is able to fully resource its capital program, including an increase in the number of apprenticeship placements as well as sponsored engineering places at universities to ensure adequate numbers of qualified staff are available to deliver the significant increase in capital investment needed over the next 10 years. We are confident that we will be able to deliver our capex program.

³ The ACCC granted EnergyAustralia a waiver from its requirements under the transmission ring-fencing guidelines that EnergyAustralia legally separate its distribution and transmission businesses. This decision was made on the basis that the public benefits of further separation did not outweigh the costs involved.

Conclusion

While EnergyAustralia is supportive of the conclusions drawn by PB with respect to our governance processes and the prudence of our proposals, we are concerned that PB's approach to replacement will impose significant risks to EnergyAustralia's network and customers in the near future. EnergyAustralia believes that the approach taken by PB to view the replacement of assets in isolation is simplistic and does not take into account the variety of complex factors that influence a business's replacement strategy. Furthermore, we believe PB's recommendation in relation to Ourimbah is also simplistic and does not take account of all the factors driving its replacement. Given it will be the TNSP, not the ACCC nor its consultants that will be held responsible for performance of the system should assets fail before they are replaced, ACCC should not accept PB Associates' reductions in regard to the replacement program.

Yours sincerely,

(TREVOR ARMSTRONG)
Acting General Manager – Network

Cc: Matthew McQuarrie