



**SUBMISSION TO AUSTRALIAN ENERGY REGULATOR REVIEW OF
TRANSGRID'S REVENUE PROPOSAL FOR 2009/10 TO 2013/14**

15 August 2008

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EXECUTIVE SUMMARY

The Energy Users Association of Australia (EUAA) welcomes the opportunity to submit the following comments to the Australian Energy Regulator (AER) for its consideration in relation to its consultative review of the TransGrid Revenue Proposal 2009/10 to 2013/14.

The EUAA is a non-profit organisation funded by membership fees, internally generated revenue and external funds. It is focused entirely on energy issues and was formed in 1996. Members determine EUAA policy and direction and elect a Board made up of fellow members. The Association members are business users of energy with activities across all states and many sectors of the economy. The EUAA has over 100 members and this includes most of the largest users in New South Wales and those large users who are directly connected to the TransGrid network.

End-users are presently facing multifaceted and significant cost pressures on many fronts and we are therefore very concerned that TransGrid is proposing what in effect is a 32% increase in average TUoS between the current and next five-year regulatory periods. TransGrid has not substantiated its proposals with robust cost-benefit data, and it has not demonstrated how the proposal will benefit users, how capex is appropriately timed in terms of the economic cycle (would deferral reduce costs?) or how it has sought to minimise its cost escalators.

The EUAA recognises that the efficient management and growth of a transmission network requires the consideration of many decision trade-offs in an evolving environment of uncertainty and change. These trade-offs can include a choice between asset maintenance and replacement, including the deferral of capex, as well as asset augmentation and alternative supply-demand management strategies, each comprising network and non-network alternatives. Many of these trade-offs relate to network projects that have substitutes or complements, including many that relate to other market participants in the areas of generation, demand management, distribution networks, and indeed market and trading infrastructure. The evaluation of a revenue proposal therefore requires a consideration of these trade-offs and alternatives, ensuring an appropriate balance with respect to time, place, network needs, solution options and customer impacts. In the absence of market-based pricing signals associated with the use of transmission, the economics of these alternatives is necessarily connected with this revenue review process.

The EUAA understands that ideally it is the market and customers that should be determining the balance between investment alternatives. Indeed, this consultation process is providing the market and customers with some opportunity to do this, albeit regulatory-based rather than market-based, and therefore likely to be strictly second best.

The EUAA has conducted an initial assessment of TransGrid's proposal, and present the findings in this submission. It should be noted that EUAA member views have been obtained in preparing this submission.

The following includes the significant findings of this initial assessment:

1. The proposal features an excessive request for increased revenue, including a 96% real increase in capex, a real increase in the regulatory asset base of 39%, a 33.7% real increase in opex and a 32% real increase in average TUoS. Coming on top of cost pressures facing electricity users in New South Wales on multiple fronts – higher wholesale electricity prices, higher gas prices, a carbon price, an expanded renewable energy target and other large network price increases (including for distribution in New South Wales – the prices TransGrid is proposing are unwelcome and will impact on the competitiveness of energy users in New South Wales;
2. TransGrid has failed to supply sufficient supporting data to justify and demonstrate many of its assertions, preventing customers with an opportunity to fully validate their revenue request; the EUAA recommends that the AER request TransGrid to substantiate their proposed capex with cost-benefit data, including deferral analysis.
3. The preparation and determination of the revenue proposal is occurring in a period of unprecedented uncertainty, particularly with respect to likely but unknown carbon policy, the international credit crisis and an economic slow-down. While events such as the introduction of a carbon pollution reduction scheme are likely to occur, the industry can not yet be sufficiently certain of its form, the level of any CO₂e or associated price caps, nor transitional arrangements that may feature with its introduction. The costs to TransGrid or generators cannot therefore be estimated with sufficient certainty to meet the capital expenditure criteria of the National Electricity Rules. We recommend that these costs be separated from the proposal and that TransGrid be asked to demonstrate how this capex is consistent with the capital expenditure criteria of the NER, and why there are no deferral options that are prudent and efficient to protect customers from price increases until policy uncertainty is resolved.
4. Variances between allowed and actual expenses continue to occur, with implications for the size of the regulatory asset base, and therefore prices. Insufficient explanation makes it difficult to determine whether this variance is efficient and prudent, or whether it may be otherwise strategic. It is vital that the regulator seek further information and explanation on this so that the objectives of incentive regulation are satisfied and end users are not being forced into a situation of paying excessive transmission charges as a result;
5. Some anticipatory capex has occurred in advance of the successful completion of regulatory tests. This is a matter for concern to users and we recommend that the AER investigate whether such capex has inappropriately entered the RAB, or is proposed to enter the RAB in advance of meeting the regulatory test.

6. The revenue proposal relies on demand assumptions from the 2007 Annual Planning Report (APR), despite updated and significantly lower demand expectations in the 2008 APR;
7. Trade-offs between opex and capex have not been demonstrated on a project or asset class basis. Choices between maintenance and asset replacement can therefore not be validated by customers. We request that TransGrid demonstrate these trade-offs.
8. The proposal features a worrying inconsistency between claims on one hand to have compiled a 'comprehensive database' of demand management options, yet to have exhausted all demand-management options specific to a proposed 118% increase in asset augmentation expenditure;
9. Proposed contingency projects are excessive, totalling \$2.2 billion dollars; their need is not substantiated with data. When assessed in conjunction with the massive capital augmentation and replacement programme, it suggests potential deliverability issues, having possible implications on system security and reliability that is not addressed via a risk management strategy; we recommend the AER investigate this serious concern;
10. Input cost assumptions appear high given recent commodity price falls and an emerging economic slowdown. The ability to deliver such a huge capex program would suggest that spare capacity must already exist in its business, questioning whether input cost pressures are real. The EUAA recommends that the AER investigate the apparent inconsistency between the ability to deliver such a huge program and the claimed cost pressures associated with labour and skills shortages.
11. Operations and maintenance benchmark survey data submitted by TransGrid appears to substantiate previous/current levels of opex, not the proposed 33.7% increase in opex. The EUAA recommends that the AER ask TransGrid to demonstrate what additional productivity and cost minimising efforts have been identified to justify that the survey findings will continue to be valid.
12. TransGrid selected a base year assumption for opex forecasts that appears to feature opex levels 3.6% higher than 2007/08 (real 2008 \$), and 3% higher than estimated for 2008/09;
13. The reference period for determining the risk free rate and demand risk premium in the WACC calculation should appropriately weight recent market volatility, and be consistent with the emerging economic slow-down, fall in yield curves, and moderating inflation expectations given commodity price falls; and
14. TransGrid provides no strategies for managing the asymmetric cost pass through risks facing customers. Customers have learnt through negative experiences with at least two TransGrid pass throughs in the existing regulatory period about the downside of these risks and the need for tightly drafted and controlled pass through provisions. We note AER's supportive comments on this at the Public Forum.

1 INTRODUCTION AND OUR INTEREST IN THIS REVIEW

The Energy Users Association of Australia (EUAA) welcomes the opportunity to submit the following comments to the Australian Energy Regulator (AER) for its consideration in relation to its consultative review of the TransGrid Revenue Proposal 2009/10 to 2013/14.

The EUAA is a non-profit organisation funded by membership fees, internally generated revenue and external funds. It is focused entirely on energy issues and was formed in 1996. Members determine EUAA policy and direction and elect a Board made up of fellow members. The Association members are business users of energy with activities across all states and many sectors of the economy. The EUAA has over 100 members and this includes most of the largest users in New South Wales and those large users who are directly connected to the TransGrid network.

End-users are presently facing multifaceted and significant cost pressures on many fronts and we are therefore very concerned that TransGrid is proposing what in effect is a 32% increase in average TUoS between the current and next five-year regulatory periods. Given this concern, and a recognition that our comments are in effect contributing to a consultative industry assessment of its capex, opex and revenue proposal, we have prepared the following comments based on our initial review of TransGrid's proposal. The EUAA feels strongly that an assessment of end-user impacts should be a critical component in a revenue determination for a monopoly service provider.

Our comments are described in the following two sections. First we discuss observations that are general in nature, applying to the TransGrid revenue proposal overall. We then discuss specific concerns that relate to identified components of the revenue proposal.

2 GENERAL COMMENTS

The following discusses observations that are general in nature, applying to the TransGrid revenue proposal overall.

2.1 Uncertainty

The EUAA recognises that the process to prepare and file a revenue proposal can be extensive, requiring numerous and sequential steps to prepare and validate inputs and assumptions. Moreover, the consultation and determination process that follows a filing is similarly time consuming and extensive. Indeed, this is an important element of the scrutiny that is an essential part of effective regulation of a monopoly service provider such as TransGrid. As a result, the quality and currency of input data and assumptions can change as time progresses. While this is to a large extent unavoidable, its consequences can have significant impacts on revenue decisions and end-user prices.

The EUAA is aware that the current process to reset TransGrid's revenue will occur during a period of extra-normal uncertainty, particularly given present momentum by government to implement major changes to carbon policies, changes that will have profound impacts on electricity market assets, supply and demand assumptions and end-user prices. The continuing credit crisis is also rapidly evolving, presenting the market with an extended period of uncertainty and volatility. Current market perceptions suggest that this is preceding an economic slowdown, given substantial falls in commodity prices over the last 3 to 6 months, and given indications by the Reserve Bank that monetary policy may shift towards a cycle of interest rate reductions, causing bond yields to fall, and suggesting that inflation expectations are moderating.

Having said that, there is always uncertainty associated with a regulatory determination that extends for five years into the future and it is important that current conditions and trends are not just extrapolated into the future but have a solid foundation behind them. We are concerned that this is not the case with all of TransGrid's proposal.

There is also an emerging view among some commentators that the 'high growth economies' such as China and India could be affected by any slowdown, especially if it involves their key markets such as the United States. If this happens, it would affect our own commodity sector and moderate the escalating costs being seen in the economy at the moment. These macro-economic trends could also have a significant impact in moderating the higher costs that are such a significant component of TransGrid's proposal. The AER need to ensure that it does not just accept at face value the costs being proposed but ensures they are justified and likely to actually be incurred.

Customers recognise the challenges that this unprecedented period of uncertainty implies for a revenue determination, and are concerned of potential cost implications should risk factors significantly affect the margins and parameters that determine revenue requirements and potential cost pass-through events. These ultimately impact end-use customers, particularly in relation to the resultant network charges, the risk provisions that are part of retail contracts, and the effect that these have on end-user prices and retail margins.

The EUAA notes that although some uncertainty events such as a changed carbon policy can reasonably be expected to occur during the next regulatory control period, the effects of this on the market are yet unknown, and therefore it is likely that associated costs cannot be estimated with a sufficient degree of certainty to satisfy the capex and opex objectives in the National Electricity Rules that guide the AER determination process.

2.2 Information Disclosure and this Consultation

A significant factor that influences a forecast of the level and profile of network expenditure, and therefore of required revenue, is the asset management strategy that guides the maintenance and renewal of network infrastructure. This feeds into the assumptions and analysis that guide the forecasting process. The EUAA notes that there are trade-offs between asset maintenance and renewal, and that transmission system investments are often substitutes or complements of other investment options, including many that are specific to generation, demand management, distribution networks, and indeed market and trading infrastructure. Transmission system investment options must therefore be evaluated in the wider context of solutions that can address a reliability need. These solutions can comprise short and long-run options, some dependent and some mutually exclusive, each of which may imply further trade-offs or opportunities.

In the absence of market-based temporal and locational pricing signals associated with the use of intra-regional transmission, the economics of these alternatives are necessarily connected with this revenue review process. The EUAA understands that ideally it is the market and customers that should be determining the balance between investment alternatives. Indeed, this consultation process is providing the market and customers with some opportunity to do this, albeit regulatory rather than market based and therefore likely to be strictly second best. Indeed, if TransGrid were to put such proposals to 'the competitive market', it is quite possible that they would be severely 'marked down' and punished with a significant loss of market share. Given the reality of TransGrid having a monopoly in transmission services in New South Wales and customers having no choice but to use their services they are heavily reliant on the regulator operating as surrogate for such forces and making a determination that reflects as nearly as possible these forces.

The EUAA is therefore disappointed that TransGrid's information disclosure is inadequate, and fails to provide the detail to substantiate many of the recommendations in its Revenue Proposal. Customers would appreciate a greater level of information disclosure and transparency,

including cost-benefit detail that is specific to scenario, project, time and location, including the non-network and demand management deferral options and consequences that were factored into investment and maintenance choices.

3 SPECIFIC COMMENTS

The following discusses specific concerns that relate to identified components of the revenue proposal.

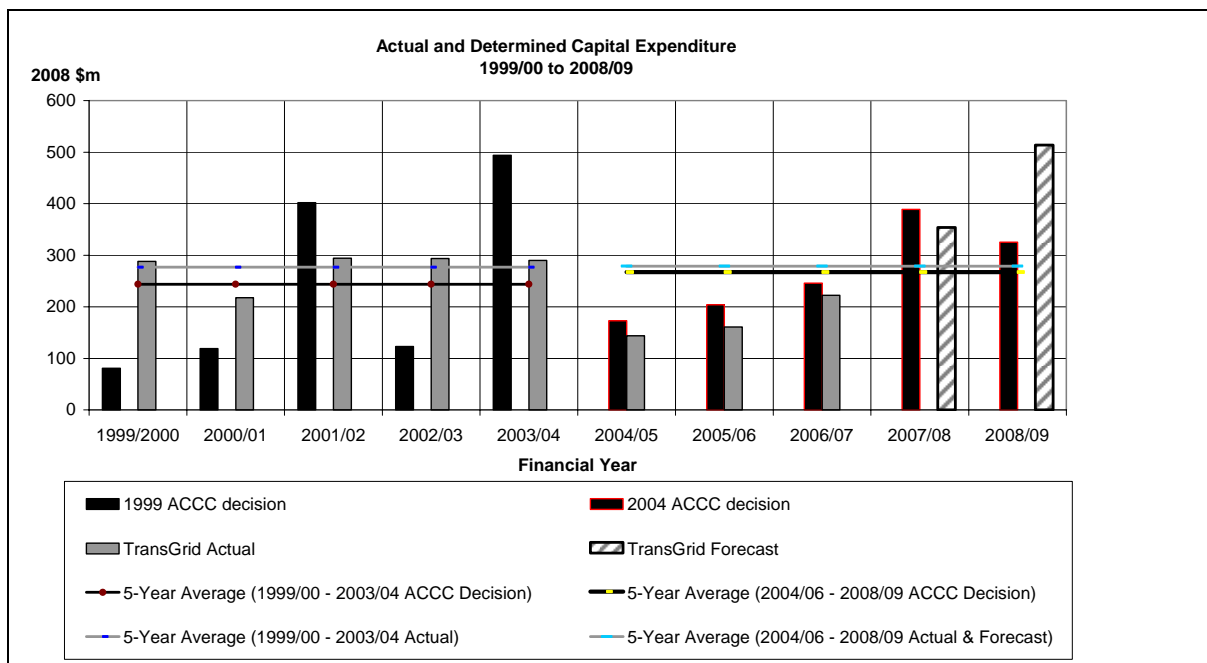
3.1 Regulatory Asset Base and Capex

In this section of the submission we discuss specific concerns related to the Regulatory Asset Base (RAB) and Capital Expenditure (Capex). We separately consider historical and proposed capex.

3.1.1 Historical Capex and Asset-Base Roll Forward

Figure 3-1 shows the actual and determined capex performance of TransGrid in real (2008) dollars. The EUAA observes a worrying variance between actual and determined capex on a year-by-year basis, underspending in the first four years of this regulatory control period, then expecting to overspend in the last year.

Figure 3-1 Actual and Determined Capital Expenditure 1999/00 - 2008/09



We make the following observations:

- TransGrid has typically overspent its capital allowance;

- TransGrid has underspent its capex allowance by more than \$96m in the three financial years commencing 2004/05;
- Using a partial capex forecast for the financial year 2007/08, TransGrid expects it will underspend by almost \$35m;
- Using forecast expenditure data only, TransGrid expects it will overspend its capex allowance by more than \$188m in the final year of the current regulatory period; and
- Over the full five years of the current regulatory period TransGrid expects to overspend its capex allowance by \$57m, or 4.3%.

TransGrid explains this expenditure profile on page 45 of its Revenue Proposal:

The expenditure profile during the current regulatory period is different to that allowed for in the ACCC decision, with TransGrid spending later in the period. Apart from delays in the construction of some large projects a major reason is the uncertainty generated by the change from an ex post to an ex ante regime during the ACCC's determination period, with TransGrid not receiving the final ACCC decision until one year into the regulatory period.

Although the EUAA is not in a position to judge the validity of TransGrid's explanation for this variance, it does have a general concern that the ex ante regime may encourage 'gaming' given that the incentive regime provides for the TNSP to retain the benefits of a capex underspend, and to derive deferred benefits of an overspend to the extent that this is rolled into the asset base at the time of the next revenue reset. The later provides the TNSP with an additional return for the life of the assets. The pattern of underspend followed by overspend also sets up what may be presented as a forward trend of increasing capex requirements beyond the current regulatory period with a possible aim of setting up the pre-conditions and arguments for a step wise increase in capex in the next regulatory period which must be investigated.

Accordingly, the EUAA recommends that the AER investigate variances in the expenditure patterns of TNSPs, particularly in terms of the validity of these variances from an efficiency and prudence perspective. As an outcome of these investigations, should the AER find behaviour of concern, the EUAA recommends that the AER commence a process to develop behaviour mitigation rules to protect end-users from any likelihood of inflated transmission prices.

The EUAA also recognises that regulatory uncertainty is a feature that affects many markets, particularly when large, lumpy and infrequent investments may be required. Delays in necessary investment can have significant implications for the level and volatility of prices over time, and therefore the costs and risks that may be borne by end-users. *The EUAA is therefore sensitive to TransGrid's suggestion that uncertainty delayed the start of some of its projects, and accordingly suggests that the AER seeks to minimise any propensity for regulatory risk as part of its ongoing regulatory review responsibilities.*

ANTICIPATORY PROJECT EXPENSES

In section 7.13 of the Revenue Submission, TransGrid discusses the deliverability of its capital programme. In particular, it discusses arrangements to advance preparedness for the commencement of major projects; specifically:

As noted earlier in this chapter three large projects account for over \$1.1 billion expenditure in the 2009/14 regulatory period. Recognising this TransGrid has advanced the project preparation, planning and feasibility studies on these projects.

For each of these projects, project schedules, scoping and risk analyses have occurred and project commencement (DG1) has been approved by TransGrid's Board. The Regulatory Test for each of these projects will be undertaken in 2008. In some cases, strategic property purchases have been made ahead of the project to remove the risk of delays or loss of an available site in the project delivery. [p80]

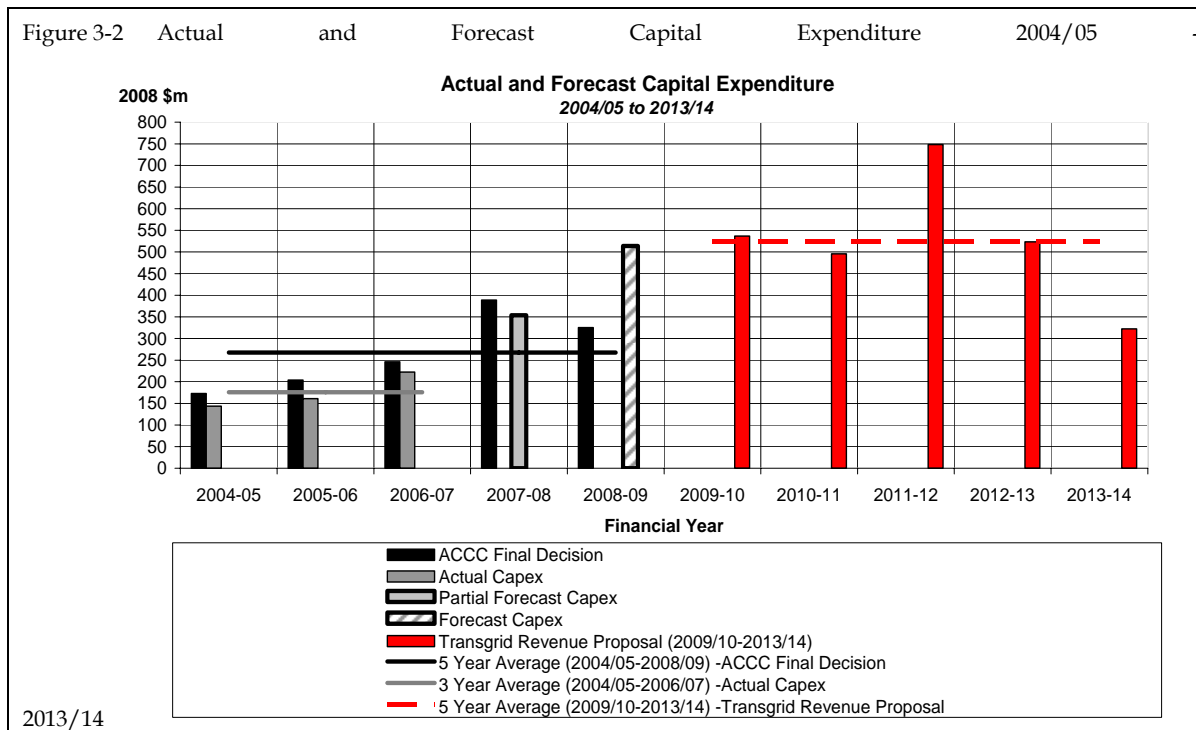
Although the EUAA recognises that it is prudent and efficient to conduct preliminary work to improve the deliverability of certain projects, particularly given the investment decision risks and lags that feature in a five year regulatory cycle, it has some concern that preliminary work should not incur significant capital expenses in advance of revenue approval, or indeed the completion of the Regulatory Test. TransGrid claims to have made some strategic property purchases in advance of any regulatory tests. *The EUAA recommends the AER review anticipatory capital expenses to be sure costs are not inappropriately rolled into the asset base should projects not proceed as a consequence of a revenue determination or the subsequent application of the Regulatory Test.*

3.1.2 Forecast Capex

The following summarises the key assumptions used by TransGrid in the preparation of its capital expenditure forecasts for the forthcoming regulatory period:

- Forecast demand as set out in TransGrid's 2007 Annual Planning Report;
- Scenario analysis that models key themes that will affect likely generation developments and consequently the development of the NSW transmission system;
- Transmission reliability standards required by the NER and the NSW Electricity Supply Act, as set out in the 2007 Annual Planning Report;
- Replacement of equipment in accordance with TransGrid's Network Asset Management Plan and related asset management strategies;
- Project scopes developed to meet the augmentation and replacement requirements;
- Project costs developed from TransGrid's cost estimating database; and
- Increases in costs based upon forecasts of wages growth, construction costs and cost risk analysis.

Error! Reference source not found. shows the results of this forecasting process; in particular, it shows the historical and forecast pattern of capex provided by TransGrid in its Revenue Proposal (2008 \$).



TransGrid is proposing the following increases:

- 96% real increase in total capex (\$2,627m) relative to the inflation-adjusted value of its total regulated capex for the current regulatory period (\$1,337m); and
- 88% real increase in total capex above a similarly adjusted total of its actual (and forecast) capex for the current regulatory period (\$1,394m).

This substantial increase can be disaggregated into the following expenditure components:

- \$519.6 million for *Replacements* (up 31% from \$396.9m)
- \$1,632.3 million for *Augmentation* (up 118% from \$748m)
- \$333.4 million for *Land and Easements* (up 120% from \$151.4m)
- \$141.6 million for *Support the Business* (up 44% from \$98.1m).

The EUAA is of the view that this proposed increase in the capex allowance is excessive, and may not be supported by the capital expenditure criteria of chapter 6A of the National Electricity Rules (v21). The EUAA raises the following observations in support of its concern:

DEMAND ASSUMPTIONS SUPPORTING THE FORECASTING PROCESS

The EUAA recognises that the filing process for TransGrid's Revenue Proposal required extensive preparatory work in advance of the finalisation of the recently published TransGrid New South Wales *Annual Planning Report 2008*. As a result, the capital expenditure forecasts rely on demand assumptions from TransGrid's *2007 Annual Planning Report*. The EUAA observes that demand forecasts have been revised downwards in the recently published 2008 report. When measured on a supply basis at NSW connection points, for example, scheduled energy has been revised downwards by 2.3% in 2009/10, by 5.2% in 2013/14 and by 7.9% in 2016/17. A reduction of this magnitude can have a significant implication for the extent and timing of infrastructure investment requirements. Given changed assumptions between 2007 and 2008, it also follows that changed demand behaviour would alter power flow outcomes, potentially changing the locational needs of transmission infrastructure upgrades, and indeed, alternative investments that may be a complement or substitute for projects in TransGrid's capital programme.

The EUAA is therefore concerned that the demand forecast used by TransGrid is no longer as realistic as it could be (although it appreciates that this information has only been available since TransGrid lodged its proposal), and that as a consequence, the capex programme is overstated. TransGrid shares some of this concern:

The capital expenditure forecast for augmentation projects is based on the demand forecasts in TransGrid's 2007 Annual Planning Report (APR). As there is a NER requirement that TransGrid's revenue proposal be lodged on 31 May 2008, the 2007 APR was the best source of transmission planning information available given the long lead times required to develop the capital programme estimates for the revenue proposal. The 2008 APR will be issued in June 2008 and the AER will be advised of any changes to the capital expenditure forecast as a result of the new energy and demand forecasts.

Initial indications of forecasts for the 2008 APR suggest both energy and scheduled demand forecasts may be reduced relative to those published in the 2007 APR. It is unlikely that the changes will affect the timing of many projects or materially affect the quantum of capital expenditure for augmentation projects. [Page 59 of the Revenue Proposal].

The EUAA questions TransGrid's assertion that this large downward revision in forecast demand would be unlikely to materially affect the timing or quantum of capital expenditure requirements. A major input into TransGrid's capital expenditure forecast is the completion of a scenario analysis process, which anticipates future generation requirements given a forecast of scheduled demand, and given alternative planning scenarios. For TransGrid to understand how such a large downward revision in the demand forecast could impact capital expenditure requirements, it would need to trace changes through its complex scenario analysis, and subsequent transmission system modelling. This year the scenario analysis was conducted by ROAM consulting, and repeated when inputs were found unrealistic. This repeated analysis

preceded the publication of the 2008 APR, and by the filing date of the Revenue Proposal, it had not yet been fully reviewed; the following is claimed by TransGrid in its Revenue Proposal:

The full analysis of the impact of the revised ROAM report date is a lengthy and complex process and is not completed at the time of this submission.

When TransGrid has completed the analysis of the latest ROAM report it will advise the AER of any changes to the proposed capital expenditure estimates. [Page 60].

TransGrid has not therefore traced the effect of the demand changes through its scenario analysis, and therefore could not have assessed implications for its power system modelling. It follows then that TransGrid cannot be certain that its proposed capital expenditure requirement is compliant with the capital expenditure objectives of the National Electricity Rules.

The EUAA recommends that the AER requests TransGrid to update its capex modelling, and to provide a revised forecast of its capital expenditure requirements that can be scrutinised.

GREENHOUSE POLICY ASSUMPTIONS

A major input into TransGrid's capital expenditure forecast is the completion of a scenario analysis process, which anticipates future generation requirements given a forecast of scheduled demand, and given alternative planning scenarios. Eighteen of TransGrid's 36 planning scenarios modelled the impact of a carbon policy theme, defined by the assumption of a nominal \$35/tonne CO₂e tax (and proxy for a carbon pollution reduction scheme) that was applied for the whole period of the revenue reset. Compared with a business as usual case, this carbon policy theme had a probability weight of 60%¹.

The EUAA believes that this probability theme is not as realistic as it could be, and that the probability weight is inappropriate. Although a carbon policy process is continuing to develop, the current debate suggests that a carbon pollution reduction scheme is likely to be implemented with a very soft start at some stage between 2010 and 2012 or beyond; this scenario was not explicitly modelled by TransGrid, nor were any sensitivity studies conducted that moderated the high carbon price and early policy timing of the carbon policy theme. Given the significant implications that a carbon pollution reduction scheme could have on consumption behaviour, innovation and network requirements, particularly the timing, location and class of investment alternatives that may be needed to resolve reliability needs, the EUAA does not agree that the capex program is appropriately modelled. The EUAA therefore does not agree that TransGrid has met the requirements of the capex objectives in the NER; the EUAA cannot be sure that the massive expenditure program is prudent and efficient.

¹ Refer to page 3 of the ROAM CONSULTING Main Report; <http://www.aer.gov.au/content/item.phtml?itemId=720395&nodeId=4b624ab433196fd2170fa87d5809c9d2&fn=Appendix%20E01%20-%20Roam%20Consulting%20Pty%20Ltd%20Report.pdf>

The EUAA recommends that the AER request TransGrid to update its modelling with additional sensitivity scenarios for its carbon policy theme, featuring the likely outcome of a soft and late start to the introduction of a carbon pollution reduction theme. In the absence of this additional modelling, the EUAA recommends that the capital expenditure components that are specific to TransGrid's carbon policy theme are not accepted in the determination of TransGrid's revenue requirement.

While the EUAA does agree that it is likely that a new carbon pollution reduction scheme may commence during the forthcoming revenue control period, it does not agree that the industry can yet be sufficiently certain of its form, the level of any CO₂e or associated price caps, nor transitional arrangements that may feature with its introduction. TransGrid modelling as it stands does not sufficiently reflect this uncertainty. It may be the case that the costs to TransGrid or generators cannot be estimated with sufficient certainty to meet the capital expenditure criteria of the National Electricity Rules; if indeed this is the case, then these projects would be likely candidates for consideration as contingency projects if realistic triggers and associated expenditure requirements can be agreed.

ONGOING APPROPRIATENESS OF THE PLANNING APPROACH

TransGrid develops its capital expenditure plan to maintain reliability standards in the context of ongoing demand growth and a forecast of associated and incremental new generation that is weighted in favour of thermal plant. The EUAA notes that the likely introduction of a carbon pollution reduction scheme may lead to some early retirement of coal fired plant, and a greater reliance on gas and intermittent generation. Growth in scheduled demand may stall or significantly slow as a consequence, a feature that may be assisted by innovation in demand-side measures to assist end-users transition to a step change in system prices. The EUAA notes that the background premise of TransGrid's planning process may therefore significantly change, questioning the validity of its framework for planning and operating the transmission system. A changed environment, with substantial levels of intermittent generation, changed demand behaviour and altered power flows may require a change to the planning approach, and therefore customers question the prudence of the augmentation investments proposed by TransGrid. Facing this extent of uncertainty and risk, particularly given a potential for stranded investments, the EUAA would expect that a similarly placed competitive firm would seek flexible options to delay large, lumpy and fixed investments until uncertainties regarding carbon policies are largely resolved. This is indeed what we are seeing in the generation market and in the behaviour of EUAA members.

The EUAA therefore requests that the AER closely reviews the project deferment options evaluated by TransGrid to ensure that the timing of such an extensive suite of capital investments is appropriate in this high point in the economic cycle and period of uncertainty.

CAPEX-OPEX TRADE-OFFS

The EUAA is concerned that TransGrid is proposing a 36% real increase in its asset replacement expenditure, while also proposing a 33% increase in its operating expenditure, the latter occurring after an extended period of relatively stable maintenance spending. For any given project, the EUAA understands that asset replacement becomes optimal when the present value of opex exceeds the value of capital investment. Moreover, after asset replacement, associated opex could be expected to fall. Having reviewed the information that TransGrid submitted, the EUAA did not find that TransGrid provided the cost-benefit data to justify its trade-offs between asset maintenance and renewal, nor to show how it managed non-network options as part of its expenditure forecasting process for specific projects.

The EUAA recommends that the AER require TransGrid to provide further evidentiary justification for its capex and opex and that this show the rationale and supporting evidence for the programs outlined and the trade offs involved.

Asset management strategies are a major contributor to both operating and capital expenditure. In its Revenue Proposal, TransGrid provides the following description of its asset management approach:

Asset management strategies are developed for each of the asset categories and well-established asset performance review processes ensure that any emerging performance issues feed into the strategy development. Asset replacement projects are evaluated by detailing the project need, identifying potential options, and comparing the risk and economic efficiency outcomes to ensure the most appropriate solutions are implemented. [p36].

It also states that in its asset replacement policy:

Consideration of asset replacements are triggered by:

- *Asset condition;*
- *Equipment performance and reliability;*
- *Supportability of assets; and*
- *Compliance with safety and environmental obligations. [36]*

These are all quite logical comments and involve statements of assessments undertaken that the EUAA would expect from a prudent TNSP. However, they are not supported by evidence as TransGrid did not provide details explaining its asset management strategies for each of the asset categories, nor did it provide any outcomes of its asset performance review process.

The EUAA recommends that the AER require TransGrid to provide this information so it can be assessed by the regulator and end users.

The EUAA does note that TransGrid seeks to justify a large proposed increase in both maintenance expenditure and asset replacement expenditure due to the maturing asset base, and the associated costs of maintaining this:

A maturing asset base has also required TransGrid to implement an asset replacement programme that identifies assets with deteriorating performance or risk of failure. In addition, with the maturing of the NSW transmission system and an increase in the total size of the network, an increase in the total maintenance workload is also needed to ensure reliability of supply. [p24]

and

5.3.1 Impact of a growing and mature asset base

The major impact for TransGrid in the next regulatory period will be the increasing operational expenditure required to maintain the reliability of the assets in the existing transmission system and the additional maintenance works needed to support the new assets associated with the capital works program in this proposal. [p35]

and further

TransGrid's experience has been that maintenance costs typically increase as assets get older. This is largely driven by the increase in non-routine maintenance as assets age, parts become harder to source and manufacturer support disappears. [p35]

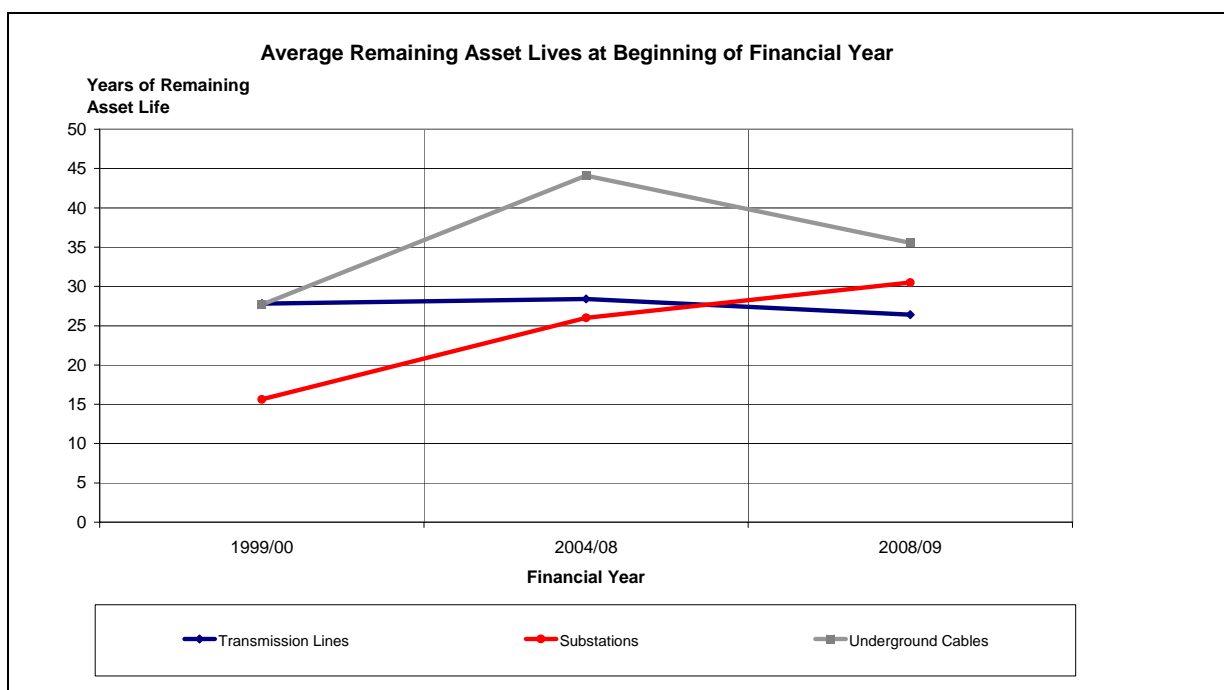
These are all logically sounding statements but should be supported with evidence.

The EUAA has conducted a summary review of the remaining asset lives of significant asset classes.

Figure 3-3 below shows changes in the remaining asset lives of certain key classes of TransGrid infrastructure; in particular, it shows that since 1999, the average remaining asset life attributable to transmission lines has been stable at 27-28 years. The remaining asset life of substations has increased from 15 years in 1999 to over 30 years in 2008. Similarly, the remaining asset life of underground cables has increased from about 27 years to 35 years during this period. At least for these significant asset classes, it appears that the asset-base is not maturing, contrary to what TransGrid claims in its Revenue Proposal. The EUAA has also reviewed historical actual expenditure for these asset classes, and has not identified any significant increase over the last 5 years that may indicate that asset age is contributing to an increase in maintenance expenditure.

Preliminary analysis by the EUAA therefore questions whether TransGrid's assertion is correct, that is, that it has a need to replace aging assets to manage increasing maintenance expenditure.

Figure 3-3 Average Remaining Asset Lives (Weighted by Asset Value)



The EUAA request the AER to investigate this issue, and to request TransGrid to demonstrate the trade-offs it modelled between asset maintenance opex and replacement capex for the individual investments that feature in the large replacement program that they have proposed.

DEMAND MANAGEMENT

The deterministic N-1 reliability standard combined with the 10% probability of exceedence (POE) planning assumption has the effect that network solutions, when evaluated at the limits of reliability criteria, imply very large costs for system flexibility that is rarely needed. This is particularly the case when network solutions require costly additions to physical infrastructure. These costs must then be amortised across all users, implying what could become a large 'reliability premium' in end-user transmission prices. It is for this reason that demand-management initiatives provide compelling solutions, particularly when rarely used flexibility can be provided by a low cost behavioural solution such as load-shifting, or via the use of distributed generation which may already be in existence.

In its Revenue Proposal, TransGrid describes its participation in the Demand Management and Planning Project, which it claims has produced a comprehensive database of opportunities for the reduction of peak demand; specifically:

As a significant example of demand management planning, TransGrid has been working with Energy Australia on the Demand Management and Planning Project (DMPP) with the objective of slowing the growth in demand, and thus deferring or avoiding network expansion, in Sydney. Initiatives to

gather information on opportunities for reducing demand have been instigated at more than 700 sites in St George/Sutherland, Sydney CBD, North Sydney, the Inner West and East Sydney.

The project, to be completed by June 2008, has produced a comprehensive database of opportunities for the reduction of peak demand.

TransGrid intends to continue this work with Energy Australia in the expectation of implementing initiatives that may defer capital works in the Sydney Metropolitan area. TransGrid also plans to cooperate in this way with the other NSW distributors, Integral Energy and Country Energy. [p31]

The EUAA welcomes this initiative by TransGrid and Energy Australia. However, we note that the DMPP has been in existence for several years and has achieved very little actual return for the money invested. ***The EUAA is of the view that the program should be reviewed to quantify the benefits received so far, particularly given that it does not appear to have yielded much appreciable value in mitigating the proposed capex requirements of TransGrid in its Revenue Proposal.***

In its Revenue Proposal, TransGrid describes extensive efforts to encourage demand management initiatives. Indeed, it states that network augmentation options are considered only once other demand-management options have been exhausted:

When operational and demand management initiatives have been exhausted and non-network solutions are not viable or efficient, network augmentation is planned to relieve emerging constraints caused by load growth.[p31]

Again, we welcome these comments from TransGrid which show recognition on their part of the role the DM can play in more efficient operation of their network.

However, given that TransGrid has proposed a 118% increase in augmentation expenditure to a total of \$1.63 billion (2008) dollars over the next regulatory control period, the EUAA is disappointed that TransGrid has not provided the cost-benefit data to justify its proposed programme. Such a large increase in capital expenditure appears inconsistent with their claim to have exhausted demand-management, operational and non-network options, particularly when they claim the success of having creating a comprehensive database of demand management options as part of the Demand Management and Planning Project.

The EUAA therefore recommends that the AER ask TransGrid to explain, in the context of each of their proposed asset augmentation projects, the apparent inconsistency between the exhaustion of demand-management options and their new comprehensive database of demand-management options. We also recommend that they be asked to demonstrate clear cost-benefits with their substantial capex programme, including the assessment of DM opportunities and plans to enhance these in the next regulatory period as a means of minimising the substantial capex proposals.

PROJECT EVALUATION AND INFORMATION TRANSPARENCY

TransGrid has provided a detailed description of the probabilistic approach used by ROAM consulting to support its capital expenditure forecasting efforts. The EUAA has concern, however, that while this provides a useful approach for managing planning uncertainties, a critical step in the determination of a capital expenditure forecast is the subsequent investment modelling that resolves potential planning needs with an efficient and prudent choice of structural and non-structural options; TransGrid provides insufficient information for the EUAA to understand the level of efficiency and prudence that is intrinsic to its selection of proposed capital projects.

The EUAA notes that transmission system investments are often substitutes or complements of other investment options, including many that are specific to generation, demand management, distribution networks, and indeed market and trading infrastructure. Transmission system investment options must therefore be evaluated in the wider context of solutions that can address a reliability need. These solutions can comprise short and long-run options, some dependent and some mutually exclusive, each of which may imply further trade-offs or opportunities. In the absence of market-based temporal and locational pricing signals associated with the use of intra-regional transmission, the economics of these solutions are necessarily connected with this revenue review process. The EUAA notes that ideally it is the market and customer choices that should be determining the balance between investment alternatives. In the absence of a market as with monopoly transmission services, end users are dependent on the regulator and regulatory process to ensure an appropriate balance is obtained. The EUAA is disappointed that detailed scenario-specific and locational-temporal cost-benefit information has not been provided to facilitate a consultative review of TransGrid's evaluation and choice of investment options. Without this cost-benefit information, an accurate assessment of TransGrid's revenue request becomes impossible.

TNSPs are rewarded based on the value of their assets. This provides an incentive to increase their asset base. Demand management solutions can conflict with this objective as they reduce the need to expand the asset base, even though they may provide a more efficient solution. It is therefore important for the AER to ensure that regulatory incentives are realigned to promote greater use of demand management solutions by TransGrid. TNSPs should be required to provide evidence of the demand management solutions that they have considered and the attempts made to obtain demand side responses. These attempts must be serious and meaningful. Based on our experience and exposure to these matters over time (in both transmission and distribution), it is also our view that there are still significant ways in which non-network solutions do not encounter a level playing field. This includes inadequate notice periods of potential opportunities to allow non-network solutions to be developed, a lack of information about opportunities, a lack of players with the ability to co-ordinate such options, a lack of end-user knowledge and education, a lack of good information about potential providers (which TransGrid say they now have) and other factors. Attention to all these issues is needed. However, it would be unfair and inappropriate for individual TNSPs to be left with the sole

responsibility for this. Policy makers, regulators, retailers, customers, aggregators and bodies such as the EUAA all have a role to play.

The EUAA recommends that the AER request TransGrid to provide:

- *Details regarding the need for individual projects, based on objective planning criteria, and whether each project passes (or is likely to pass) the Regulatory Test criteria at the projected completion date;*
- *Details regarding the investment alternatives considered for each project, including whether the scope (design, specification, etc) is prudent and in accordance with best industry practice;*
- *Details regarding the timing of individual projects, including the cost and consequences of deferment options.*
- *Cost estimates for individual projects. The basis for cost estimates is not discussed in detail, or whether these have been independently reviewed, or benchmarked, against recent projects to ensure prices are realistic and efficient.*

The EUAA also recommends that the AER investigate options to better align incentives for TNSP's to choose demand management solutions.

CONTINGENCY PROJECTS

TransGrid are proposing more than \$2.155 billion of contingency projects, including unspecified capital and operating costs associated with contingent interconnection upgrades with Queensland and Victoria. The EUAA is concerned that TransGrid's proposal is excessive, not supported by modelling and cost data, and devoid of any information on potential deferment options featuring non-network solutions such as demand-management options, local generation, or other non-structural opportunities.

The EUAA notes that it is the market and end use customers that are best placed to determine the balance between investment alternatives. Given the monopoly that TransGrid has in New South Wales, this consultation process provides the market and end use customers with an opportunity to review and comment on TransGrid's investment proposals, but they are not provided with sufficient data to make this assessment.

When combined with their proposed capex allowance, proposed and contingent capital expenditure aggregates to an amount that is about 360% of the capex allowance for the current regulatory control period. Although most contingency projects are not expected to meet trigger criteria, this does nonetheless represent a very large potential cost and delivery threat to TransGrid's capital programme, a worry for the EUAA given the implicit relationship with system security. Given its already significant capital programme, and its proposed 96% increase in projected expenditure, the EUAA doubts that TransGrid will have much organisational capacity on hand to deliver further projects, which poses a major system security risk should certain trigger events occur, and the affected projects be credible. In a competitive industry,

firms would therefore be expected to implement risk-management programmes to appropriately manage these risks. The EUAA expects the same of TNSP's in our industry. We note TransGrid's comments that its capital planning process gives priority to demand-management and non-network solutions, resorting to network options only after these solutions are exhausted.

The EUAA therefore recommends that the AER seek the following further information from TransGrid:

- *What spare organisational capacity is expected to exist across the forthcoming regulatory period that could conceivably be used to implement each of these contingency projects, and further, to what extent would a continued tight labour and skill market affect the ability to fill capability gaps within the timeframes necessary to deliver each project;*
- *For each project what is the delivery time necessary between the occurrence of the trigger event, and significant delivery milestones including project scoping and staffing, leading to the commissioning of the asset;*
- *Details of its risk management plan to address what appears to be an excessive risk to the cost and deliverability of its capital programme;*
- *Details of what additional efforts TransGrid is proposing in order to identify and evaluate demand management, non-network and deferment options to manage this cost and deliverability risk to its capital programme;*
- *Details of how its stated priority to demand-management and non-network solutions, resorting to network options only after these solutions are exhausted will be utilised in relation to these projects; and*
- *Information on the delivery risk to its proposed capital programme should any of these contingency projects meet trigger criteria.*

The EUAA further recommends that the AER remain mindful of the potential cost impacts contingency projects have on end-use customers, particularly in relation to the risk provisions that are needed in retail contracts, and the effect that these have on end-user prices and retail margins. The EUAA also notes that in a competitive industry, firms could not expect to automatically pass through all costs when contingency events occur, nor would they typically have such an extent of reserve organisational capacity on hand to deliver these projects, when already implementing a courageous capital programme. It is for this reason that effective risk management is necessary feature of good governance and should be applied transparently to the regulatory process, matching claims and comments with factual information and sound analysis.

INCREASE IN INPUT COSTS AND DELIVERABILITY OF CAPEX PROGRAMME

As indicated immediately above, the EUAA has deliverability concerns associated with TransGrid's proposed capital programme. TransGrid is proposing a 96% increase in capital expenditure, including a further \$2.155 billion dollars of contingency projects.

The programme appears very ambitious given the risk of the skills and labour shortage on the ability of TransGrid to deliver the capex forecast. TransGrid has used the tight labour and skills market to justify cost increases. Yet they expect to be able to almost double their already high level of investment throughout the next regulatory control period. We believe that either the capex programme will not be delivered due to the inability to source sufficient contractors to undertake the work, or alternatively, if TransGrid is able to deliver the programme, it would mean that the overall quantity of work in the industry has reduced, thus lowering the unit cost. In either case, the forecast capex seems excessive.

We note that in the last 3 to 6 months, commodity prices have started to fall. This has been seen in the price of oil, copper and aluminium; all important inputs to electricity transmission. The reason for this fall is two fold: lowering of demand as growth rates in major growth economies like China and India moderate and more importantly, the high prices have elicited increased supply. More sources of commodities have come online recently as new mines have opened in response to high commodity prices and these sources are not going to disappear because prices have recently come down. We thus could expect that commodity prices will not revert to the very high prices we had seen in the recent past but will return to more moderate levels. However they could still be higher than five years ago.

In light of the above, we recommend that the AER review the input cost assumptions of TransGrid, and request TransGrid to explain how it could expect to deliver a doubling of its capex program over the next 5 years in an environment that features a labour and skills shortage.

LAND AND EASEMENT EXPENDITURE

TransGrid proposes that the capex allowance for land and easement expenditure increases by 120% to \$333.4m dollars (2008 dollars). This is a dramatic increase, and appears excessive, particularly given the deliverability concerns that the EUAA has already identified in relation to the almost doubling of the proposed capital programme and also the depressed state of the New South Wales real estate market, especially in areas where transmission easements are likely to be sought. The EUAA has already discussed the lack of supporting information to assist the market to review the appropriateness of TransGrid's proposed capex programme; customers reiterate this point.

Customers also recommend that AER investigate TransGrid's land and easement acquisition proposals in the context of this proposed increase. The EUAA would expect increases in land and easement capex to be significantly less than increases in augmentation capex given a propensity for network augmentation on pre-existing land and easements.

SUPPORT THE BUSINESS EXPENDITURE

The capital costs necessary to support the business have also been forecast to substantially increase. TransGrid is proposing a 44% increase in real terms to \$141.6m dollars (2008). The

EUAA expects that changes in the level of 'support the business' capex should typically be proportional to the size of the network, albeit subject to economies of scale.

In its Revenue Proposal TransGrid justifies this increase by reference to the replacement of the SCADA system. This project is described in its application as a \$22.8m project for the forthcoming period, on top of \$7.3m already allocated in the current regulatory period. Stripping out the SCADA project, Support the Business expenditure is forecast to increase from actual expenditure by 31.6% to \$118.8m dollars (2008). TransGrid does not justify this very large increase, nor does it present sufficient data for the EUAA to assess whether it is consistent with the Capital Expenditure Criteria of the National Electricity Rules.

The EUAA therefore recommends that the AER investigate this level of increase, benchmarking it against other networks, and adjusting for benchmark economy of scale factors as appropriate.

3.2 TransGrid's Energy and Demand Forecasts

This is an area of considerable concern to the EUAA. Our main concerns are as follows:

- There is confusion on the forecast that TransGrid has used;
- The most recent data suggests much lower future demand and this has not been considered.

THERE IS CONFUSION ON THE FORECAST THAT TRANSGRID HAS USED

The demand and energy forecasts that have been used in the development of the opex and capex forecast and in TransGrid's projection of future prices is not clear. On page 59 of its submission, TransGrid say that

"capital expenditure forecasts for the augmentation projects is based on demand forecasts in TransGrid's 2007 Annual Planning Report".

However on Page 58 of the submission, TransGrid provide their own energy and demand forecasts, which are significantly higher than the energy and demand forecasts used in the 2007 Annual Planning Report.

The EUAA recommends that the AER ask TransGrid to clarify this point.

The most recent data that TransGrid has provided suggests much lower future demand and this has not been appropriately taken into account

TransGrid's 2008 Annual Planning Report forecasts that demand (for the medium scenario) by 2013/14 will be 1,100 MW lower than what they had forecast in their proposal. To put this into context, 1,100 MW is more than the capacity of two Tallawarra CCGT stations.

Despite this significant decrease in expected future demand, in their proposal TransGrid suggest that, while their 2008 Annual Planning Report was likely to indicate lower demand growth than their 2007 Annual Planning Report (which TransGrid says it used to develop its augmentation expenditure proposal), “it is unlikely that the changes will affect the timing of many projects or materially affect the quantum of capital expenditure for augmentation projects.”²

This does not seem credible: surely such a significant reduction in expected future demand would have a significant impact on the augmentation investment requirements that TransGrid has proposed, on the basis of the higher future demand.

The EUAA recommends that the AER should investigate this in detail and require TransGrid to re-do its proposals based on the latest information from its 2008 APR given the significance of the changes. Otherwise, TransGrid could receive a capex allocation for the next regulatory period that involves an unrealistic and overly inflated demand forecast and the consequential costs will be passed on to end users.

3.3 Operating Expenses

In this section of the submission we discuss specific concerns related to TransGrid’s proposed Operating Expenditure (Opex). We separately consider historical and proposed opex.

3.3.1 Historical Opex

Figure 3-4 shows TransGrid’s historical operating expenditure since 1999.

In the regulatory period 1999/00 to 2003/04 (2008 dollars):

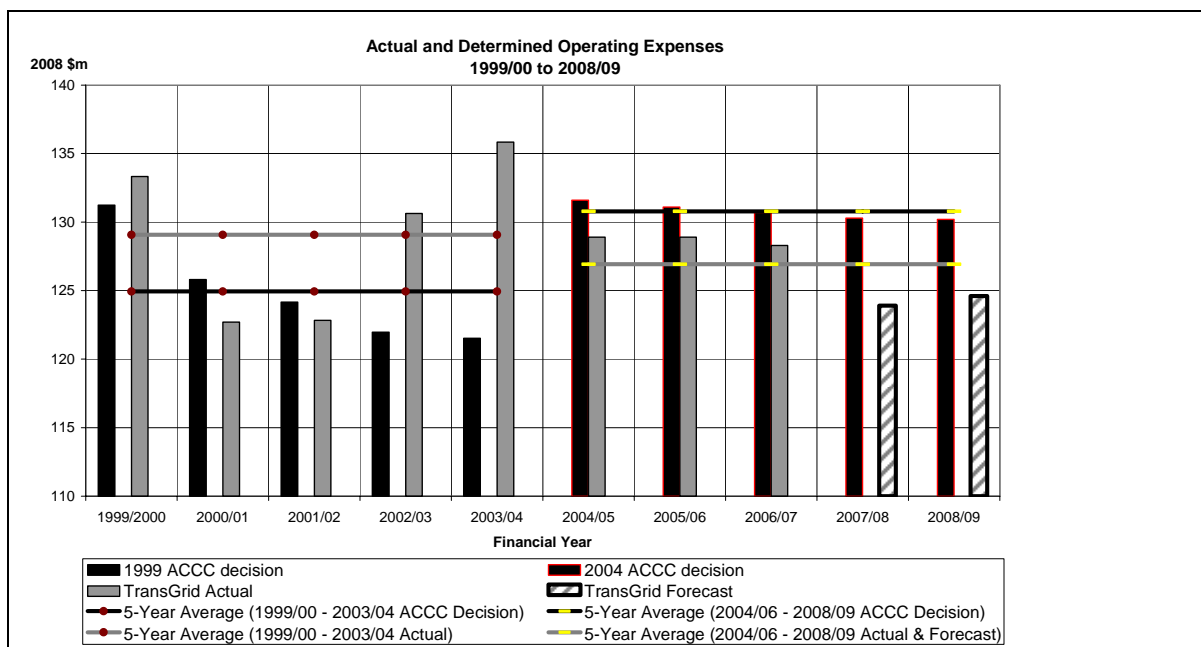
- The final ACCC opex allowance was \$624.7m
- Actual opex was \$645.3m, 3.3% above the final ACCC determination

In the regulatory period 2004/05 to 2008/09 (2008 dollars):

- TransGrid’s requested opex allowance was \$715m
- ACCC (final determination) opex allowance is \$653.9m
- Actual (including a partial forecast) opex is \$634.6m, 3% below the final ACCC determination.

² See page 31 of “TransGrid Revenue Proposal”, 31 May 2008.

Figure 3-4 Actual and Determined Operating Expenditure 1999/00 - 2008/09



In the current regulatory period TransGrid has typically spent less than its opex allowance, providing it with a contribution to its operating profit that is in excess of what was anticipated by the ACCC. TransGrid explains the underspend by a combination of a targeted cost reduction programme, and a superannuation contributions holiday, the latter affecting the financial years 2007/08 and 2008/09. The EUAA notes TransGrid’s actual opex is more than 11% less than its original requested opex for the current regulatory period, a significant result given that it used above-CPI wage pressures and a tight labour market to justify its original opex request.

The EUAA recommends that the AER investigate all variations between determined and actual operating expenses.

3.3.2 Forecast Opex

TransGrid’s approach to building up its operating expenditure forecast has been to:

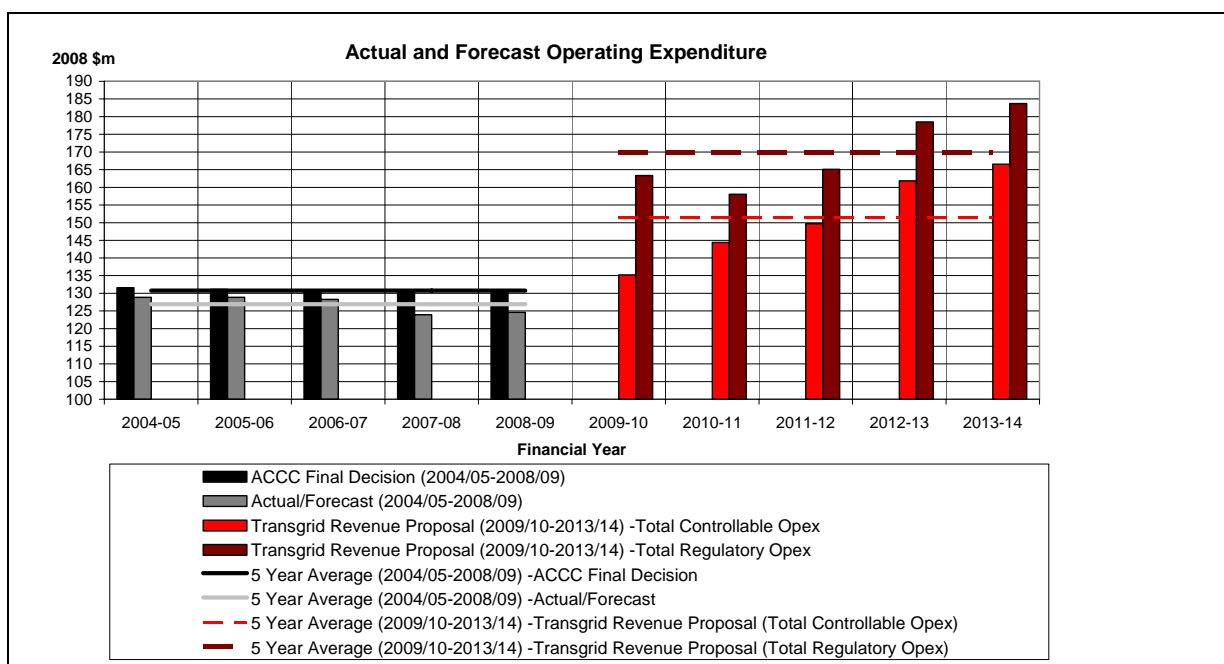
- Adopt 2006/07 as a base year for forecasting future costs;
- Preparing zero based maintenance costs for the current asset base;
- Escalate controllable costs for future years to account for new assets that need to be managed and for projected labour and input cost increases;
- Take into account economies of scale that are likely to be achieved, reduce the maintenance costs associated with replacement assets and the effect of once-off or cyclic costs; and
- Add in forecasts of other operating costs that do not escalate, or do not escalate linearly, with the growing asset base (“other operating costs”).

The following summarises the key assumptions used by TransGrid in this process:

- Asset management and maintenance performed as set out in TransGrid’s Asset Strategies, Policies and Procedures;
- The level of costs in 2006/07 being an efficient base year for forecasting expenditure;
- The impact of capital expenditure on the base level of operating expenditure;
- Increases in costs based upon forecasts of wages growth and operating material and expenses;
- Forecast demand growth that results in network support; and
- Self insurance, debt and equity raising costs.

Figure 3-5 shows the results of this forecasting process; in particular, it shows the historical and forecast pattern of opex provided by TransGrid in its Revenue Proposal (2008 \$).

Figure 3-5 Actual and Forecast Operating Expenditure 2004/05 - 2013/14



TransGrid is proposing the following increases:

- A 29.8% real increase in total opex (\$848.6m) relative to the inflation-adjusted value of its total regulated opex for the current regulatory period (\$653.9m); and
- A 33.7% real increase in total opex above a similarly adjusted total of its actual (and forecast) opex for the current regulatory period (\$634.6m).

The EUAA is of the view that this proposed increase in the opex allowance is excessive, and may not be supported by the operating expenditure criteria of chapter 6A of the National Electricity Rules (v21). The EUAA raises the following observations in support of its concern:

INCREASE IN OPEX DUE TO NETWORK GROWTH

Previous SKM studies have indicated there are economies of scale in opex related to the size of the network. These studies indicate that opex should increase by no more than 75% of the relative increase in the size of the network. Based on an augmentation capex of \$1,632M on an existing RAB of \$4,237M, this equates to an increase in the size of the network by some 39%. On this basis, an opex increase of 29% is explained by the growth in the network. The 34% average increase therefore appears excessive. *The EUAA therefore requests the AER to investigate this concern.*

FORECAST OPEX AND BENCHMARK DATA

Determining whether an operating expenditure request is prudent and efficient requires reference to an efficient industry benchmark, with some adjustment for the evolving realities of the industry context and local circumstances. The latter requiring a consideration of factors such as asset age and design, operational characteristics, financial conditions, load characteristics, demography, system topography and regulatory policy.

TransGrid has participated for several years in the International Transmission Operations and Maintenance Study (ITOMS), which in the most recent study (2007) provided an assessment of TransGrid against its international peers, determining that TransGrid sits in the category of lower than average cost, and better than average reliability.

As part of its Revenue Proposal, TransGrid also submitted a report by UMS that found that, despite continuing opportunities for further efficiency improvements, TransGrid's operational efficiency and service levels are excellent by international standards, measuring better than average against the superior performing Australian market, and global top quartile in many areas benchmarked.

While such reports are useful to assist an assessment of historic performance, the EUAA observes that TransGrid's revenue request assumes a 33.7% real increase in opex relative to actual levels in the current regulatory control period. The quoted reports did not assess this large level of increase, or the changing circumstances affecting TransGrid in the next 5-10 years. The reports do suggest that given current circumstances, recent levels of opex may be in the range of an efficient benchmark.

The EUAA recommends that the AER request TransGrid to demonstrate how the results of their benchmarking surveys would vary should TransGrid's opex increase by 33.7%.

The EUAA also observes that firm or industry commissioned benchmarking can be subject to actual or perceived biases and it would therefore prefer that independent benchmarking become

a feature of the regulatory regime applied by the AER. Such a process could be overseen by the AER with participation by all TNSPs and DNSPs, as well as energy users. The EUAA would welcome such a process being set up and would welcome participation in it. Such a process could provide useful information over the course of the next regulatory period that would be a valuable addition to more effective regulation in the next regulatory period. However, if TNSPs are not willing to contribute, publicly available information could be used.

The EUAA therefore recommends that the AER, with participation from all TNSPs and DNSPs under its regulatory control, and end users, establish an independent benchmarking project overseen by a committee of network businesses and end users.

DEMAND ASSUMPTIONS SUPPORTING THE FORECASTING PROCESS

The EUAA refers the AER to section 3.1.2 of this submission where we summarise our concerns regarding TransGrid's use of an outdated demand forecast from its previous 2007 Annual Planning Report. The forecast appears to have overstated the capex program, and therefore also the estimates of operating expenditure needed to provide for the proposed increase in the asset base.

CHOICE OF BASE YEAR

TransGrid has based its forecast operating expenditure on a projection of the adjusted costs of an efficient base year. The selected base year is the financial year 2006/07.

The EUAA notes that TransGrid have not provided any detailed explanation as to the reasons why 2006/07 is an efficient base year for the purpose of forecasting their opex revenue requirements. The EUAA observes that actual operating costs, when measured in real 2008 dollars, were 3.6% higher in 2006/07 than the following year 2007/08, and also 3% higher than their projections for the current year 2008/09.

The EUAA therefore recommends that the AER investigate the implications and appropriateness of using a more current base year for the purpose of forecasting opex.

CAPEX-OPEX TRADE-OFF

The EUAA did not find that TransGrid provided the cost-benefit data to justify its trade-offs between asset maintenance and asset renewal, nor to show how it managed non-network options as part of its expenditure forecasting process.

The AER is referred to section 3.1.2 of this submission where we summarise our concerns regarding this issue.

3.4 Weighted Average Cost of Capital

The EUAA recognises that in order to maintain stability in service standards and minimum prices in the long run, the return provided to a TNSP should provide for an efficient level of

investment over time, ensuring a correct balance between capital maintenance and renewal in a broader context that encourages non-network solutions to support growth and service quality bearing in mind the low risk position of TNSPs.

Chapter 6A of the National Electricity Rules, v21, prescribes the method and values for most of the parameters to be used in calculating the Weighted Average Cost of Capital (WACC) and taxation in a TNSP's revenue proposal. The setting of these parameters are the result of a consultative and iterative process that now provides the market with a degree of certainty affecting the method for setting regulated revenue, therefore reducing investment risk, and the effect this has on the timing and scope of investment decisions, and ultimately end-user prices.

Two of the major parameters in the WACC that are determined as part of a TNSP's revenue determination are the nominal risk free rate and the debt risk premium. Given that all other parameters are fixed, the EUAA will not discuss them as part of these comments.

We note, however, that these parameters are currently being reviewed by the AER in a separate process but that the AER has not sought to have the parameters emerging from this review apply to the TransGrid reset even though the timing of both reviews is closely aligned and failure to apply new WACC parameters to TransGrid will make the parameters applied out-of-date. We do not support the AER's position on this. We believe there is strong evidence at least two of the existing parameters are badly out-of date and inflate the regulated rate of return provided to transmission and distribution businesses. Unfortunately, the AER's position is likely to force end users to pay higher transmission charges to TransGrid for another five years. Given the concerns we expressed earlier in this submission about the formidable and multifaceted costs pressures facing energy users in the next five years this is a most unfortunate decision for the AER to have taken.

The EUAA has also submitted a Rule Change Proposal to the AEMC seeking to have two of the key WACC parameters at issue, the equity beta and gamma, whose values are embedded in the National Electricity Rules, changed to values that better reflect their true value. If this is accepted, it will result in a significant downward adjustment in the WACC and in network charges. The Rule Change Proposal is supported by evidence and argument compiled by an acknowledged expert in this field, Associate Professor Martin Lally of the Wellington University. Our proposal also seeks a Rule Change that would see the new parameters for the equity beta and gamma applied to all regulatory reviews that commenced after the proposal was submitted, including this one.

3.4.1 Risk Free Rate and the Debt Risk Premium

The National Electricity Rules prescribe the method for determining the nominal risk free rate. This method provides the AER with discretion in determining the period of time from which, on a moving average basis, the risk free rate is calculated using 10 year government bonds. The Debt Risk Premium is then determined by calculating the premium between the annualised

nominal risk free rate and the observed annualised benchmark corporate bond rate which meet the prescribed credit rating and maturity requirements.

The EUAA agrees with TransGrid's concerns about recent market volatility, and recommends that the AER is careful that the effects of the current credit crisis and global slow-down are appropriately weighted in the selected period. The EUAA notes that expectations are suggesting a shift in monetary policy, with anticipated reductions in the cash rate leading to a downward shift in yield curves. Significant falls in commodity prices over the past 3-6 months also appear to be easing inflationary expectations, potentially underlying the changed outlook for monetary policy.

3.5 Service Standards and Performance Incentive

The following summarises our comments on TransGrid' proposed settings for the Service Standards and Performance Incentive scheme.

3.5.1 Service Component

For each of the performance metrics associated with transmission line, transformer and reactive plant availability, TransGrid has proposed an asymmetric incentive with targets based on the period 2003 to 2007, adjusted for changes in the level of capital works. TransGrid claim in each case that improvements in their historic performance levels will be difficult to find without compromising the regulatory obligations outlined in the capital expenditure and operating expenditure guidelines of the National Electricity Rules.

The EUAA observes that TransGrid did not provide any benchmark information to assist a relative performance assessment of its proposed service criteria, or any technical advice to justify its claims that efforts to improve performance may compromise the delivery of Prescribed Transmission Services as referred to by the capital and operating expenditure guidelines.

Customers recognise that performance standards of critical transmission services can affect power flows on the system, and therefore the volatility and level of wholesale market prices. They can therefore directly affect end-users via the linkage between wholesale market risk and the effect that this has on end-user prices and retail margins.

In the absence of any data to substantiate TransGrid's assertions, the EUAA cannot agree that an asymmetric incentive is appropriate. Further, the EUAA does not agree with TransGrid that these performance metrics should be adjusted for the level of capital works. The need to maintain and renew infrastructure is an ongoing need in many industries; those that are competitive are subject to the need to deliver a service standard that is commensurate with price and customer expectations, not just a capital works programme. The EUAA expects the same of TNSP's and recommends that capital works exemptions are not allowed, thereby encouraging an asset management schedule that has least impact on customers over time.

3.5.2 Market Impact Component

TransGrid has suggested a performance metric that is constrained to the four year period from 2004 to 2007 inclusive. This is inconsistent with the five year period proposed for the Service Component, and indeed with the length of the regulatory control period.

The EUAA has some concern with performance metrics that are determined by historical values. Customers believe that poor performance should be linked with the regulatory control period in which it occurs. Further, this link would also allow the measure to align the benchmark with the operating context facing the TNSP. It is acknowledged that the operation and management of the transmission grid will need to change to adapt to the locational and temporal effects of new carbon policies – to the extent that they are relevant to the next regulatory control period (see our earlier comments). The manner in which TNSP's adapt to changing needs should be linked with incentives covering the same period. Periods of poor performance should not degrade the benchmark level for future regulatory periods.

The EUAA recommends that the AER use metrics that have a term that is five years, and which is therefore consistent with the length of the regulatory control period. The EUAA also recommends that the AER investigate options for determining a metric that links performance with the regulatory period in which it occurs, therefore avoiding the use of historical values.

3.6 Cost Pass Through

TransGrid has identified in its Revenue Proposal a number of events in which it will seek to pass costs through to customers; specifically:

TransGrid's revenue cap for the 2009/14 period, as determined by the AER, is subject to adjustment for the following reasons:

- *The cap is calculated using actual CPI figures;*
- *Network support events are treated as pass-through amounts;*
- *Events related to insurance, regulatory change, service standards, tax changes or terrorism can be referred to the AER for a determination on the appropriate pass-through costs; and*
- *If a trigger event for a proposed contingent project occurs, affecting forecast capital expenditure, TransGrid may apply to the AER for an amendment to its revenue determination. [p123]*

TransGrid does not outline what arrangements or policies it has in place to manage these events, suggesting that all risk is transferred to customers.

The EUAA has major concerns with pass through provisions related to network support events; specifically:

- There is an apparent asymmetry of information and process. Customers are not provided sufficient and ongoing information to know if an event occurred that would allow a pass

through of reduced costs. Are customers allowed to apply when there are lower costs? What incentives do TNSP's have to make such applications?

- In the past regulatory provisions and rules related to pass-through events have at times been inadequate, providing for the pass-through of costs that had in part already been given;
- Pass-through provisions effectively allow TNSP's to transfer risk to customers; this transferral of risk is not matched by a commensurate ability to manage it, nor is it consistent with what would be expected in a competitive industry; and
- EUAA members have expressed their concerns that pass-through decisions in the past have resulted in price increases of up to 30%, an extent of increase that is difficult to manage, and which at times has related to expenditure in other parts of the system, and therefore which is not locationally commensurate with an improvement in service levels.

Changes in taxes and insurance events unless they are specific to the electricity transmission and distribution sector will be experienced by all businesses. No pass through allowance should be made for such changes. Exogenous events affect all businesses – this is an inherent risk of operating in a competitive market place and it should also apply to regulated businesses operating under an incentive regulation regime. Regulated businesses are compensated for undertaking this risk by achieving returns above the risk free rate in the WACC and are reflected in the market risk premium and beta values in particular. It is therefore unreasonable for consumers to have to pay the higher WACC as well as bear the risk that the higher WACC was meant to compensate. Regulators should not allow regulated monopolies the luxury of double-dipping.

Customers also have some expectations that TransGrid should seek to minimise insurance costs and network support costs in their negotiations with suppliers. *We recommend that the AER implement measures to ensure that this occurs as the existence of any pass through provision would remove any incentive for TransGrid to minimise these costs.*

The AER should also ensure that regulation is a proxy for competition when dealing with monopoly network service providers. In considering pass through applications, the AER should ask itself the question, "How would a business in a competitive environment behave when confronted with an exogenous cost increase?" This should be a key determinant of its decisions.

We often see companies absorb large cost increases to achieve a competitive advantage. Virgin Blue resisted passing through the cost of higher oil prices to airfares, despite Qantas, its only competitor, imposing a fuel levy. Businesses in a competitive environment do not pass through cost increases unless absolutely necessary as doing so could erode a competitive advantage. This normal competitive behaviour, however, seems lost on regulated network businesses as they do not experience any such pressures. It is time for regulators to apply the disciplines of the

competitive market place on monopoly network service providers. *We recommend that the AER do so as part of its determination for this review.*

Moreover, we question if all these events are truly beyond the control of TransGrid. To some extent, TransGrid may have the ability to influence the cost of some insurance events and grid support events even if a change in tax or service standard may be imposed by a political or regulatory authority.

Customers are also concerned with the definition of a “Terrorism Event” and would need a tight definition so that loosely related events cannot be construed as a reason for the pass through of cost increases.

We also note that TransGrid has already included the cost of self insurance into its opex requirements and thus question the need for cost pass through of such events when customers are already expected to pay the insurance costs.

In a related issue, Governments have required NSPs to implement increased security to prevent terrorist attacks on electricity infrastructure. We believe that the costs of increased security measures should be paid for by the Governments seeking them. TransGrid should therefore seek compensation from Governments.

Should any pass through events be accepted by the AER, customers would expect that the AER ensure that cost reductions are also passed through to customers. Simply depending on TransGrid to inform the AER and customers that costs for these events were lower than expected is not sufficient. The AER needs to consider that regulated businesses, such as TransGrid, will have little if any incentive to draw such matters to the attention of the regulator and end users are not in a well informed enough position to do so. We therefore recommend that the AER take steps to ensure that this happens as part of its determination in this review.

3.7 Customer Impact

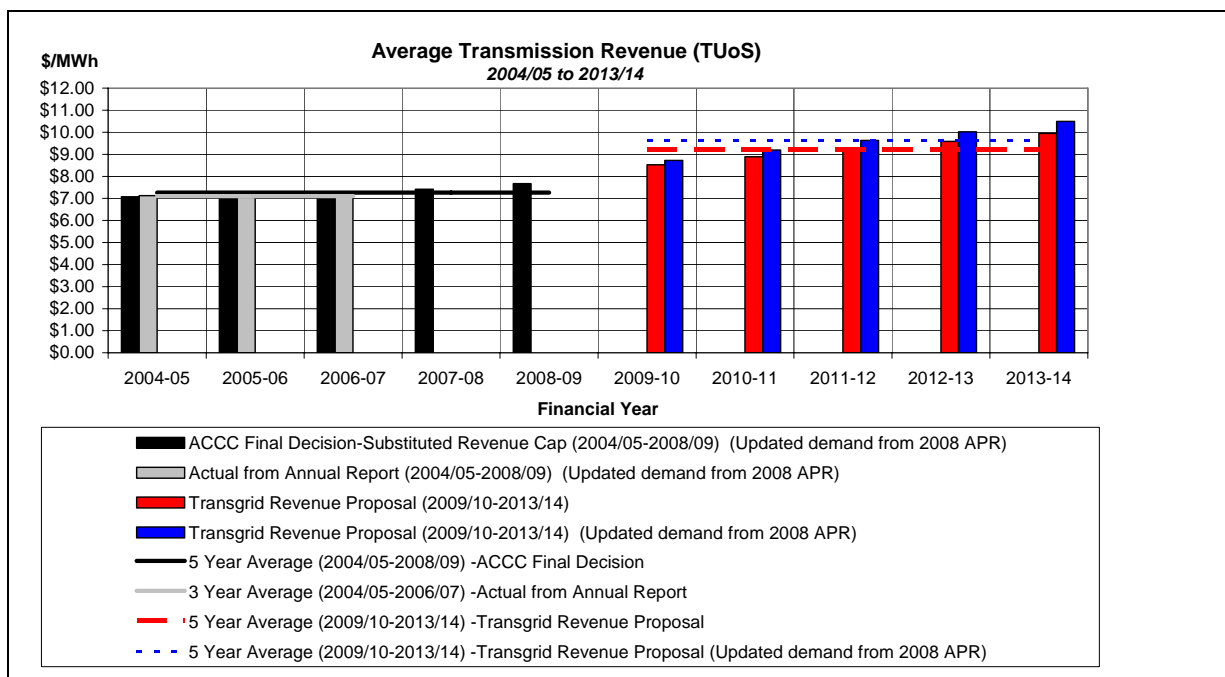
This section presents specific concerns related to the customer impact of TransGrid’s Revenue Proposal.

3.7.1 Average Transmission Revenue (Average TUoS)

The main impact for customers of the AER’s determination on TransGrid’s revenue proposal is the effect on prices. Figure 3-1 shows transmission revenue (real 2008 \$) for TransGrid from the current regulatory control period commencing 2004/05 until the end of next period 2013/14. Where relevant we have calculated this using updated demand information (connection point supply) from TransGrid’s recently released 2008 Annual Planning Report (APR). The Revenue Proposal is based on demand data from the 2007 APR, which is significantly higher. The values

presented are equivalent to the average TUoS that New South Wales consumers must pay for the delivery of electricity if TransGrid’s proposals are accepted:

Figure 3-6 Average Transmission Revenue 2004/05 -2013/14



- Average actual TUoS calculated from TransGrid’s Annual Report for the 3 years 2004/05 and 2006/07 is \$7.11/MWh.³
- Average actual TUoS calculated for the current regulatory period is \$7.28/MWh⁴
- Average TUoS calculated from TransGrid’s Revenue Proposal for the next regulatory control period 2009/10 to 2013/14 is \$9.61/MWh⁵.

The Revenue Proposal therefore implies a 32% increase in average TUoS between the current and next five-year regulatory periods.

With average price increases of this order of magnitude, the AER must recognise the impact it would have on New South Wales customers and EUAA members. The impacts on economic competitiveness when transmission prices increase by 32% over the next 5-years must be taken into consideration in the AER’s decision.

³ This is calculated using connection point demand values from TransGrid’s 2008 Annual Planning Report

⁴ Using transmission revenue for 2004/05-2006/07 from Annual Reports, expected transmission revenues for 2007/08 to 2008/09 from TransGrid’s Revenue Proposal and connection point demand values from TransGrid’s 2008 Annual Planning Report

⁵ This is calculated using connection point demand values from TransGrid’s 2008 Annual Planning Report

The EUAA recommends that the AER consider the impact of the very large increases in transmission charges on electricity users in New South Wales and that it do so within the context of the other significant energy costs pressures that users are facing on multiple fronts – wholesale electricity prices, the rising costs of gas, other network cost increases (including proposals from the New South Wales distribution businesses), the coming carbon price and the expanded renewable energy target – which will in all place end users in New South Wales under significant competitive pressure within the time frame of the next regulatory period.

3.7.2 Regulatory Framework

On a related issue, TransGrid and other TNSPs are generally regulated via a revenue cap. As such, these monopolies face little, if any, volume risk both in terms of energy, maximum demand, as well as consumer numbers. Should a consumer reduce electricity consumption due to lower production or closure of the business, all other consumers will have to pay higher transmission charges to “compensate” for the reduced revenue. In the event that a consumer leaves (e.g. a mine ceases operations), the cost of transmission services for other consumers would rise accordingly to restore TransGrid’s revenue target. Even if performance falls and the quality of its services deteriorates leading to a lower demand, TransGrid’s revenue, under this regulatory arrangement, is assured with the transmission charges rising to compensate for the losses in volumes. This provides very little incentive for TransGrid to produce a quality product to retain consumers and maintain volume.

This contrasts to price caps faced by some distribution NSPs (e.g. in Victoria and New South Wales), whose regulated charges are based on average prices. These distributors at least face the prospect of lower revenues should volumes, demand or consumer numbers fall below forecast.