



Australian Energy Regulator

NSW Electricity Transmission Revenue Reset

TransGrid Application

A response

(incorporating a new section on pricing methodology)

by

The Energy Markets Reform Forum

August 2008

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The content and conclusions reached are the work of the EMRF and its consultants.

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Executive Summary

The Energy Markets Reform Forum (EMRF) welcomes the opportunity to provide its comments on the TransGrid pricing application.

The EMRF is very concerned with the large capital and operational expenditures proposed by TransGrid. The capital expenditure proposals are being made against the background of constraints in the supply of equipment and materials (domestically and world-wide), constraints in the availability of skilled labour and strong increases in infrastructure spending in Australia over the next few years.

The AER and its consultants would need to examine TransGrid's expenditure proposals rigorously and:-

- examine the risk analysis for each capital project, with the view to deferring project implementation into the next regulatory period**
- examine the veracity of claimed cost escalators in the capex allowance**
- examine and require much larger efficiency savings than those proposed by TransGrid**
- decline the reduction in service performance targets as proposed by TransGrid**
- examine TransGrid's pricing methodology to ensure costs are allocated equitably and efficiently.**

1. Introduction

1.1. The Energy Markets Reform Forum (EMRF)

The Energy Markets Reform Forum (EMRF) is a forum representing large energy consumers in New South Wales. The EMRF is an affiliate of the Major Energy Users Inc (MEU), which comprises some 30 major energy using companies in NSW, Victoria, SA, WA, NT, Tasmania and Queensland. EMRF member companies – from the steel, aluminium, paper and pulp and the mining explosives industries – are major manufacturers in the State and are significant employers, especially in many regional centres.

The EMRF welcomes the opportunity to provide comments on the AER's review of TransGrid.

Analysis of the electricity usage by the members of EMRF shows that in aggregate they consume a significant proportion of the electricity generated in NSW. As such, they are highly dependent on the transmission network to deliver efficiently the electricity so essential to their operations. Many of the members, being regionally based in NSW, are heavily dependent on local suppliers of hardware and services, and also have an obligation to represent the views of these local suppliers. With this in mind, the members of the EMRF require their views to not only represent the views of large energy users, but also those of smaller power using facilities, and even at the residences used by their workforces.

The companies represented by the EMRF (and their suppliers) have identified that they have an interest in the **cost** of the energy networks services as this comprises a large cost element in their electricity and gas bills.

Although electricity is an essential source of energy required by each member company in order to maintain operations, a failure in the supply of electricity (or gas) effectively will cause every business affected to cease production, and members' experiences are no different. Thus the **reliable supply** of electricity (and gas) is an essential element of each member's business operations.

With the introduction of highly sensitive equipment required to maintain operations at the highest level of productivity, the **quality** of energy supplies has become increasingly important with the focus on the performance of the

distribution businesses, because they control the quality of electricity and gas delivered. Variation of electricity voltage (especially voltage sags, momentary interruptions, and transients) and gas pressure by even small amounts now has the ability to shut down critical elements of many production processes. Thus member companies have become increasingly more dependent on the quality of electricity and gas services supplied.

Each of the businesses represented by EMRF has invested considerable capital in establishing their operations and in order that they can recover the capital costs invested, long-term **sustainability** of energy supplies is required. If sustainable supplies of energy are not available into the future, these investments will have little value.

Accordingly, EMRF (and its affiliate MEU) are keen to address the issues that impact on the **cost, reliability, quality** and the long term **sustainability** of their gas and electricity supplies.

The members of EMRF have identified that transmission plays a pivotal role in the electricity market. This role encompasses the ability of consumers to identify the optimum location for investment of its facilities, and providing the facility for generators to also locate where they can provide the lowest cost for electricity generation. Equally, consumers recognise that the cost of providing the transmission system is not an insignificant element of the total cost of delivered electricity, and due consideration must be given to ensure there is a balance between the two competing elements.

1.2 The scope of this review

EMRF recognises that with the recent release of the AEMC Chapter 6A of the Electricity Rules (which is overtly stated as being pro investment by the AEMC but assessed to be biased and unbalanced by consumers), the AER is quite heavily constrained in its ability to exercise an holistic view of the final revenue that is determined as the outcome of this review.

It is noted that the determination of the Regulatory Asset Base (RAB) is quite closely proscribed, the inputs to the CAPM used to develop the WACC are predetermined, the degree to which the AER can determine any exclusion of future actual capital expenditure is limited, and the AER must allow the regulated businesses extensive freedom in determining the amount of depreciation to be included in the revenue.

By excluding these elements from detailed independent analysis, this revenue reset is limited to a review, on the allowances for capex and opex, the standards of service expected from the review, and the degree to which TNSPs are to have incentives to perform more efficiently.

In principle, these (AEMC) changes result in a reduced scope for the exercise of independent regulatory judgment by the AER and the determination of outcomes from the review based more on a mechanical process.

There is, however, an element of the AEMC changes to Chapter 6A which requires the AER to be more heavily involved in – this is the development of the ultimate tariffs and their pricing structure which will result in the AER having more involvement than in previous transmission reset reviews. The EMRF (and MEU) has had significant involvement in this aspect of the AEMC’s pricing methodologies Rules determination and views on this element will be presented later in this submission.

1.3 A Summary View of the TransGrid Application

The TransGrid application provides the following information concerning its proposals:

- It will allow TransGrid to continue to provide a reliable and cost-effective transmission service to underpin existing business activity and the expected economic and population growth of the State
- It will continue to deliver the lowest cost transmission services in Australia
- It will ensure that a high level of service performance will be maintained
- It will face a number of challenges, such as:
 - Increasing demand and network utilization, as maximum summer demands are forecast to increase by some 440 MW each year over the medium term, concomitant with an expected 24% increase in the asset base
 - Managing a growing and mature asset base to meet increasing loads and changing usage patterns and asset replacements
 - Managing expenditure with the constraint of a strong growth in input costs

Against the above background, TransGrid is proposing:

- An ex-ante capital expenditure (capex) allowance of about \$2.6 billion (compared with \$1.39 billion in the previous regulatory period) including:
 - \$490 million in network asset replacements
 - Three major projects (\$1.1 billion) driven by reliability obligations

- Other network augmentation projects (\$900 million) driven by reliability obligations
 - Non-network projects (e.g. IT, motor vehicles, etc.) amounting to \$150 million
- The following capex and opex allowances:

TransGrid Expenditure 2008 \$m	2009/10	2010/11	2011/12	2012/13	1013/14
Capex Program Real	536.8	495.9	748.0	523.8	322.3
Opex Expenses Real	135.2	144.4	149.7	161.8	166.5

- This results in the following revenue allowances:

TransGrid annual revenue	2009/10	2010/11	2011/12	2012/13	1013/14
Smoothed Revenue: Nominal \$m	670.2	725.6	785.5	850.3	920.5

The overall effect of these increases is to cause price increases of 3.9% (in real terms) per year, and even exceeding 7% in nominal terms.

These large increases should be viewed against a backdrop of nearly static consumption and an only mildly increasing demand. This raises the basic question as to the ability of consumers to pay for these costs in the current economic environment. Whilst TransGrid could point to their costs only being a small component of total consumer expenditure, the AER must take into account the multiplicity of the many small increases that are occurring widely across the community and businesses.

It is insufficient for TransGrid (and the AER) to examine such an increase in isolation of the overall economic climate.

1.4 The EMRF'S General View

The EMRF is supportive of the requirement for reliable security and quality of supply of electricity and is not opposed to network augmentations and additions, provided the investments are **efficient** and they are implemented by a **prudent** network business.

Against that background, it is instructive to refer to the Minister's Second Reading Speech (on the National Electricity Law):

“...the national electricity market objective in the new National Electricity law is to promote efficient investment in, and efficient use of, electricity services for the long term interests of consumers of electricity with respect to price, quality, reliability and security of supply of electricity, and the safety, reliability and security of the national electricity system. The market objective is an economic concept and should be interpreted as such. For example, **investment in and use of electricity services will be efficient when services are supplied in the long run at least cost**, resources including infrastructure are used to deliver the greatest possible benefit and there is innovation and investment in response to changes in consumer needs and productive opportunities. **The long term interest of consumers of electricity requires the economic welfare of consumers, over the long term, to be maximized.** If the National Electricity Market is efficient in an economic sense the long term economic interests of consumers in respect of price, quality, reliability, safety and security of electricity services will be maximized” (emphasis added).

To permit expenditure (or allow recovery of actual costs or of costs never incurred such as indexation adjustments) that is inefficient or unnecessary, or for costs previously charged to consumers as expenses of a business, could not be described as supplying services at least cost or maximizing the welfare of consumers.

The EMRF would expect the AER to have regard to the ability of TransGrid, let alone the NSW Electricity Distribution businesses (which, in combination are proposing some \$18 billion in capex for this regulatory period) to implement its significantly large capital program against the background of:

- Supply constraints in the industries supplying equipment and materials
- constraints in the supply of skilled labour.

These constraints are being imposed by:

- over \$30 billion in new power generation assets reported to be required over the next 5 or so years in the National Electricity Market
- some \$3.8 billion in new capex already approved by the AER at regulatory resets for SP Ausnet, ElectraNet and PowerLink, and to this needs to be added the ambit claims from TransGrid and Transend of another \$3.3 billion. In this regard, the AER should be aware that there has been a consistent growth in capex allowed by regulators since regulation commenced.

TNSP	Allowed capex/RAB at each reset *claimed		
	First reset	Second reset	Third reset
TransGrid (NSW)	46	40	62*
SPA (Vic)	26	40	

PowerLink (Qld)	46	60	
ElectraNet (SA)	43	48	
Transend (Tas)	56	69*	

The AER should note that these increases in percentage terms should be seen in light of the ever increasing values for the RAB (in real terms) for each business.

- over \$10 billion in new capex that has been sought by electricity network businesses in Victoria, Queensland and SA in this regulatory cycle, to which needs to be added the capex ambit claims from NSW distribution businesses. In addition to this amount is an expectation of additional capex resulting from the decision to allow the inclusion of contingent projects as well as the agreed ante capex amounts allowed for in regulatory decisions
- new capex that could be sought by regulated and unregulated pipelines over the next five years
- proposed infrastructural investments in ports, roads, telecommunications and airports
- China's and India's capital and infrastructural requirements.

The overwhelming challenge for TransGrid (and the NSW Electricity Distribution Network businesses) is to ensure that the investments (in capex) are **efficient** (i.e. "in the long run at least cost") and that they are being undertaken by a **prudent** network business.

Indeed the AER has a very important challenge, from the perspective of consumers. Against the background and foreground of very significant infrastructure spending, both world-wide and domestically over the next few years – and this is clearly identified by TransGrid as a cause of their increased costs for both capex and opex due to equipment and skilled labour shortages and the concomitant escalation in asset and labour costs – the AER (and its consultants) have a professional obligation to rigorously test TransGrid's capex and opex claims, as well as assess the scope for capital deferment into the next regulatory period. It is clearly economically inefficient to incur costs which could be reasonably deferred to a less expensive time, when there is less pressure on the availability of materials and labour.

Businesses in a competitive environment make judgments on investment based on such requirements as need for the investment, ability to deliver a project on time and to budget, cost (including short term supply pressures), ability of customers to absorb cost increases, the ability to defer the investment and the risks associated with deferral. Unfortunately, gaining regulatory approvals for capital expenditure has been observed to be quite easily obtained, with greater emphasis given to the stated wants of the business rather than the imposition of strong development of capital

controls. In this regard, it is to be noted that one of the reasons given by regulated businesses for needing to invest more capital now, is that under previous government ownership and control, the businesses were starved of capital, due to the competing needs within the government budgets. Another construction that could be applied is that governments (just as do businesses in the competitive environment) applied very strict requirements on capital expenditure.

As can be seen from the regulatory decisions made since governments handed over the responsibility of providing the necessary discipline on monopolies to jurisdictional and national regulators, the obtaining of approval to incur capital expenditure (based on a requirement for consumers to pay) has seen an explosion of new capital works undertaken. This clearly identifies that regulators are not applying the same level of discipline on regulated electricity providers as was applied by governments themselves.

As the Rules clearly show that TransGrid must provide economically efficient investment, the AER should require TransGrid to demonstrate why there is a need to provide a large capital expenditure program and to provide a risk analysis which balances the risks of deferral against the risks of excessive capital cost resulting from unnecessarily early investment at a higher cost.

In this regard the AER should recognise that if they allow TransGrid to invest capital at a time where there are high costs of implementation, the impact of such potentially unnecessary costs will be felt by consumers for the next half century. The EMRF accepts that it is the Rules that reduces the risks of inappropriate investment, as future regulators are not permitted to reopen costs previously incurred, as was the case before when regulators were allowed to optimise previous decisions. It was this ability to optimise in the future, that applied some pressure on the regulated businesses to only implement investment when it was absolutely necessary.

In the absence of this discipline, it is now a requirement on the regulator to ensure that economically inefficient investment is not undertaken. The AER can achieve this by limiting capex allowances, and by ensuring that only needed capex is permitted, and deferring capex that can be deferred with minimal impact on the reliability of the system.

1.5 Summary

It is concerning that regulatory price reviews are losing sight of the basic fact that if the regulator keeps on allowing increases in capex and opex, the prices the networks will charge for providing an essential service will take the cost of electricity beyond the capacity to pay by competitive industry and many consumers (especially disadvantaged consumers).

We are already seeing price pressures on power from generators using market power to increase the price of generation well above the cost of making power, we are seeing power prices being increased to allow for the MRET and NGAC schemes, not to mention the emissions trading scheme.

The previous regulators have permitted large increases in the recent distribution revenue reviews and if a similar approach is taken in relation to transmission applications, the essential service that is electricity supply in this day and age, will become unavailable to many consumers and cause manufacturing to migrate off shore.

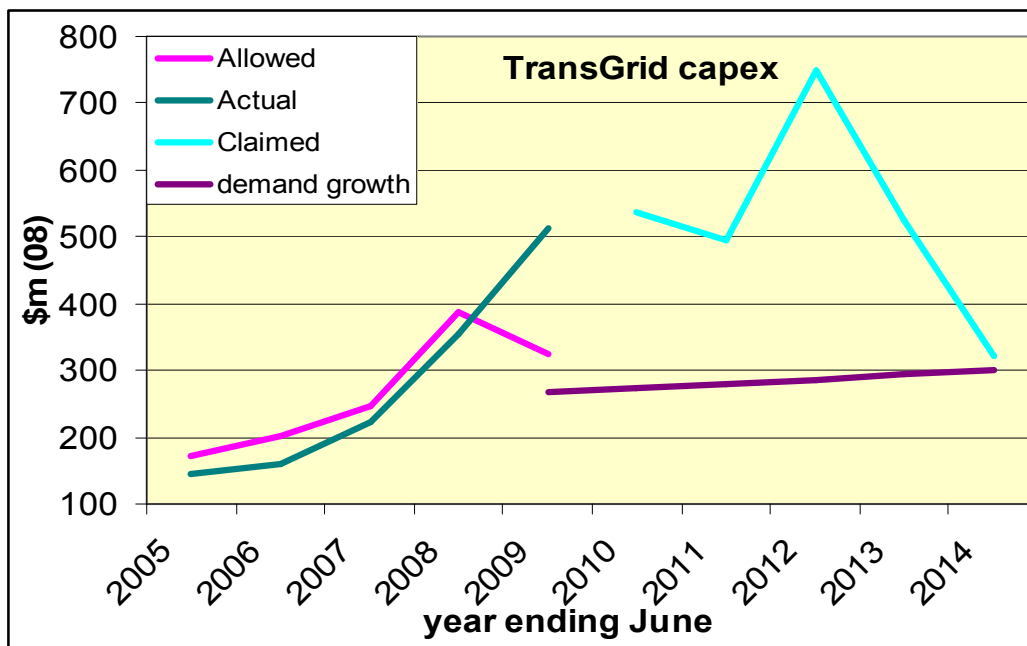
The regulators need to recognise that as more and more large power users either move off shore or close down, this will result in those fewer consumers remaining and having to carry an even greater share of the electricity supply chain prices.

2. Total Ex-Ante Capital Allowance

The TransGrid application shows that the total forecast capital expenditure is some \$2.6 billion for the next regulatory period. Some 84% of this is due to augmentations (\$1.6 billion), easements (\$287.4 million), and replacement (\$493.4 million) projects.

The EMRF has already commented on the constraints facing TransGrid in implementing its capex proposals and has asked that the AER and its consultants would need to examine the projects carefully in the light of a range of identified factors, including the scope for regulatory gaming.

The following chart shows the historic capex and the new claim for capex. TransGrid points out that its capex is strongly influenced by the growth in demand. The chart shows how the historic average demand for the current period of \$270m pa would change if demand was the only criterion for setting capex.



Sources: ACCC decision 2004, TransGrid application

2.1 Capex

TransGrid (and the other NSW network businesses) have sought to provide justifications for the significant increase in capex proposals as being due to:

- Growth, especially peak demand growth
- Reliability obligations, as part of licence conditions
- Asset renewal, as a result of ageing asset profiles.

On the surface, there would appear to be considerable scope for capital deferment or smoothing in the third area above (i.e. asset renewal) through targeted maintenance programs. One or two NSW electricity businesses have identified some capital smoothing in this area, and the AER should develop a set of principles to guide its assessments of assets renewal that could be deferred into another regulatory period. However, there is also scope for capex avoidance in the first two areas above (i.e. growth and reliability obligation). Here, the AER and its consultants would need to rigorously test the capex proposals submitted. For example, after many years of not meeting licence obligations for service performance obligations (as publicly admitted by the CEO of a NSW distribution business at the AER Public Forum on 30 July), why is it absolutely necessary for such obligations to now suddenly become sacrosanct?

In the EMRF's view, the AER has another important challenge in assessing capex proposals. As a result of the biased and unbalanced AEMC Chapter 6A Rules determination, there is so much scope for network businesses to game the regulator, so much so that they could, metaphorically but literally, drive a truck through the AER's approved capex program. Under the Rules:

- The capex program requires formal demonstration of need only for a small component of the network business's program – i.e. for augmentation programs greater in value than \$10 million (the Regulatory Test)
- There is no ex post review allowed of capex to ensure prudence or efficiency
- Once set, the network business can use the capex allowance for any project and need not use it for any project used to justify the allowance in the first instance
- If a network business decides, it can defer any capex project used as the basis of its approved capex program, and keep the financial benefit
- The AER must include in the asset base all capex incurred without assessing whether the amounts should be included, even if the network business incurs an unnecessary over-run in costs (which is very likely in this current regulatory cycle of significant infrastructural investments and as the Rules permit the network business to maintain a cost-plus culture).
- Capex projects identified as contingent projects at a reset, can be added to the allowed revenue after a reset, and the costs passed on to consumers, even if the original capex allowance has not been used
- A network business is able to obtain an increase in revenue allowances by converting a capex program to network support, yet retain the full financial benefit associated with the replaced capex allowance.

The risks to consumers arising from the Rules are significant, as the AER's discretion is limited. The risks are not only that capex programs would be so inflated by the incentives determined by the AEMC Rules, but also the

Regulatory Asset Base would be inflated by regulatory gaming. The risks that the expected explosion in capex and the RAB would extend beyond the forthcoming regulatory period are very real and very significant. Against this background, the AER and its consultants would need to rigorously examine ex-ante capex and contingent capex projects with the view to limiting the scope for gaming to inflate the capex program and RAB over the next two regulatory periods.

As all businesses know, it is relatively easy to justify capex from a bottom up assessment. What is more difficult is to ensure that the capex claimed is justifiable from a market perspective. TransGrid provides data which shows that the market indicators (consumption and demand) are not escalating at a rate that justifies the massive injection of capital that is being claimed. In a competitive environment, the directors of a business would require proponents of a capital expenditure program to demonstrate one of the following

- there is an increase in demand in the market justifying the capital project so as to meet the expected increases of customer demand (in this case the market is not providing this support)
- the injection of the capital will increase market share (in this case TransGrid is a monopoly and holds 100% of market share, regardless
- The injection of capital will maintain the current level of market share (in this case there is a need for some capital to maintain the reliability of the existing assets).

What TransGrid has provided is a list of new capital projects, and a justification of each. What has not been done is a risk assessment of the likely downside if the work is delayed. Such an analysis requires a series of estimates of the risk for increasing periods of delay. Until such an assessment is made and the risks analysed, the AER cannot approve any of the capex programs. The AER needs to put itself in the role of the directors of the business to ensure that the capex has been assessed properly in terms of the market impact.

It has been stated that this is a role for the actual directors of the business. This is not so. Once the regulator has given approval for a capital project, the directors of the business know they are assured of receiving a guaranteed return on the investment. This takes away from the directors of the business any of the risk for authorizing the capital expenditure.

The EMRF members very clearly understand the risks involved in authorizing capital projects – every member has this responsibility on a continuing basis. If the risk of achieving the forecast outcome is covered by a guaranteed return (bearing in mind that there is now no risk of future optimisation) the directors of the business have little risk in authorizing approval for a capital project. Thus the AER must accept that it has

effectively the responsibility of ensuring that a capital project (both in terms of value and timing) is economically efficient. The AER has not been provided with adequate risk analysis to undertake this task.

This point is further developed in section 4.2 of this submission.

However, unless the AER carries out such a risk analysis, it will not be done. The jurisdiction has abrogated this role and TransGrid does not need to carry out the role, leaving the responsibility entirely with the AER, who has the responsibility also of ensuring the revenue allowed is economically efficient.

The EMRF strongly recommends that the AER seek from TransGrid a detailed risk analysis for each capital project, including an assessment for delays in implementation. With this data, the AER can assess whether it is absolutely necessary to be carried out during an acknowledged high cost period or could be deferred with little risk until a time when costs for its implementation are likely to be lower.

2.2 Easements

The EMRF notes with interest, that easement costs are forecast to amount to \$287.4 million or 11% of total capex forecasts. TransGrid states that forecast costs of easements are estimates based on "...easement acquisition costs based on surrounding land usage" (TransGrid, p73). The EMRF is not clear that it agrees that easement acquisition costs ought to be based on surrounding land usage, as it suggests a form of replacement costs. As easement assets have no alternative value, they should be valued at actual costs (or likely actual costs) and not on a proxy based on replacement costs, as implied by the term "costs based on surrounding land usage".

The EMRF draws attention to an affidavit by the AER currently before the Australian Competition Tribunal¹, in which it stated:

"5.8 The AER, like the ACCC before it, considers DORC (or any equivalent deprivation/replacement value methodology) to be at the upper limit of valuations for the assets of a TNSP, but that it is inappropriate to value easements at this maximum limit.

5.9 Only (indexed) historical costs, or some proxy for same, should be the basis for quantifying any adjustments relating to easements.

¹ Re Application under section 71B of the National Electricity Law for a review of a transmission determination made by the Australian Energy Regulator in relation to ElectraNet Pty Limited pursuant to clause 6A.13.1 of the National Electricity Rules. File No 1 of 2008.

5.10 Unlike transmission network assets, the value of easements does not typically decline. As such easement values are unsuited to depreciation analysis. As real property interest (sic), easements generally appreciate continuously over time with land values, and typically at a rate exceeding inflation.

5.11 Accordingly, valuing easements on a replacement cost basis would be likely to lead to windfall gains for TNSPs and to price shocks for electricity consumers” (AER, p.13).

5.15^l in the TransGrid determination (2000) the ACCC considered “it appropriate to include TransGrid’s existing easements in the regulated asset base at their historic purchase cost rolled-forward to 1 July 1999”. (AER, p.15).

The EMRF, therefore, requests the AER to ensure that:

- TransGrid’s easement assets to be rolled into the 2009 RAB are only valued at historical costs, i.e. it is not based on DORC.
- TransGrid’s easement assets forecast in its 2009/14 ex-ante capex program is based on forecasts of actual costs and not on “costs based on surrounding land usage” (TransGrid, p.73).

2.3 Wages growth

Much of the capex budget is in relation to construction cost, which is driven by construction wages and materials costs. TransGrid provides a view that capex should be inflated to allow for the movement in construction wages due to the need to allow future projects to remain within budget.. In fact, there is an argument that construction wages are falling relative to average wages (or to put it alternatively, that average wages are catching up with construction wages).

In its report last year to the AER², Econtech points out that over the previous period the wages nationally in selected industries have moved (on average) in the following way:

² Econtech Pty Ltd, Labour Costs Growth Forecasts, report prepared for the Australian Energy Regulator
13 August 2007

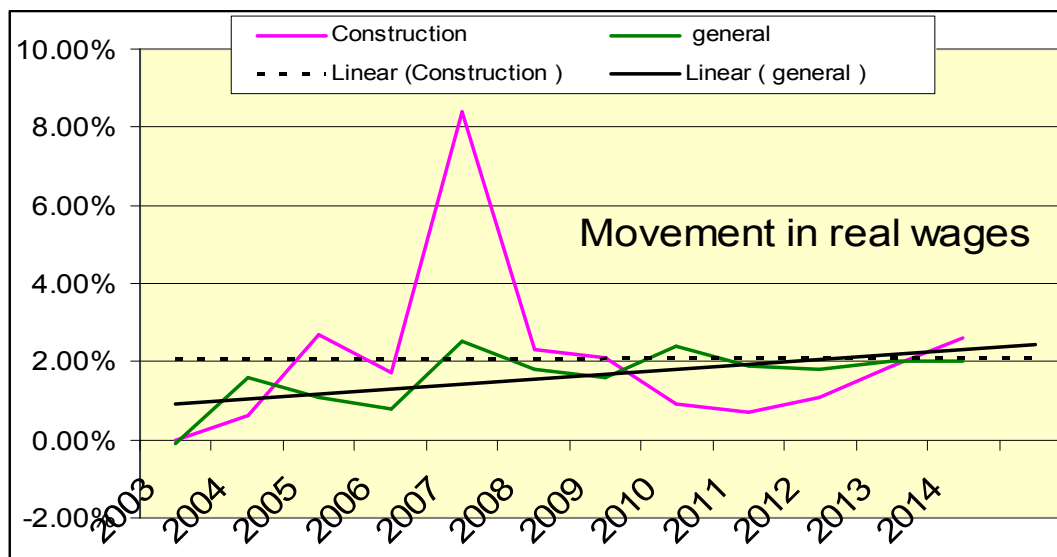
Table 6.3 (b)
Average Real Wage Growth in Australia (%)

	Mining	Electricity, Gas & Water	Construction	All industries
1986-1996	1.1	0.5	0.3	-0.3
1996-2006	1.7	2.9	1.0	1.7
2008-2014	1.1	3.7	2.1	2.6
2006-2016	1.1	3.2	2.1	2.2

Source: LCM

This data implies that the labour cost growth in the construction sector was less than the average labour cost growth in all industries by some 70 basis points for the period 1996 to 2006 – the same period for which TransGrid has been corporatized. Econtech opines that for the next six years construction wages growth will be less than the average by 50 basis points, a slightly lower discount than experienced in the previous ten years.

CEG³ provides forecast data (Table 26: Summary of escalation factors (year ended June) for wages growth which can be shown graphically as follows.



Source: CEG table 26

This clearly shows that labour costs in the construction industry are falling in comparison to the average across all industries. As can be seen in section 3.2 below, average wages growth has remained reasonably static for the past decade. The current TransGrid capex program has been carried out in a period where construction wages growth has been at a premium to

³ TransGrid application appendix F, Escalation factors affecting expenditure forecasts A report for NSW Electricity Businesses April 2008

average wages, but the forecasts by CEG imply that this premium will be quickly eroded, implying a lower cost in the future.

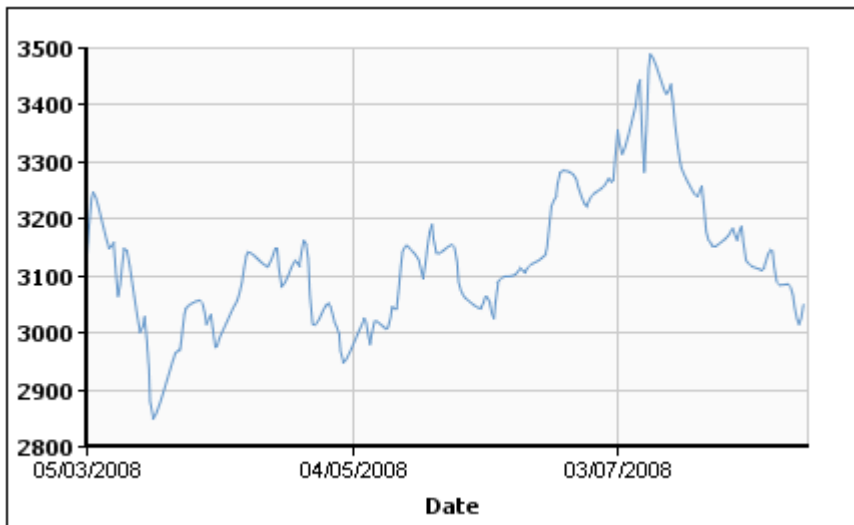
This provides clear evidence that there is no need at all to increase the allowance for capex to reflect rising construction wages growth.

2.4 Material cost growth

CEG provides a view that the increases in the costs of materials are likely to further increase in real terms from now (the time at which TransGrid costed its capex program). As a result there is an implication that the capex allowance needs to be inflated to allow future projects to remain within budget.

However, timing is all important in forecasting movements; the following charts show the movement of key materials ex LME since the report by CEG.

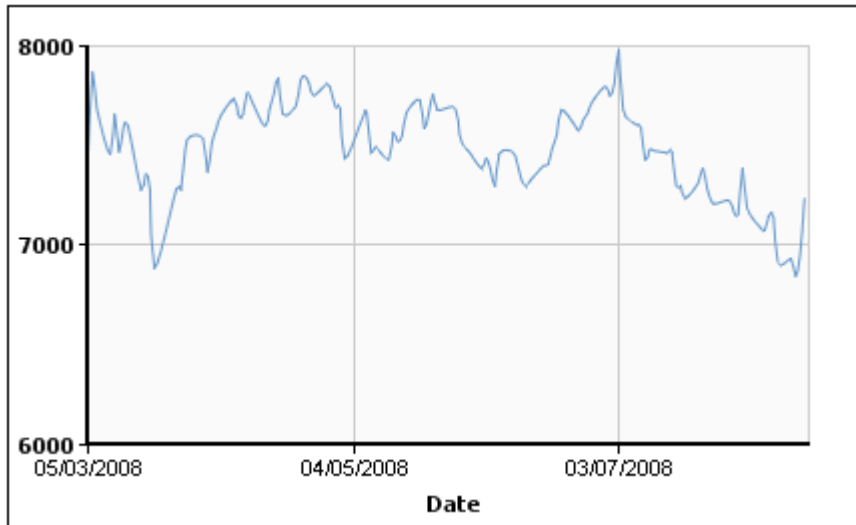
Aluminium, in \$US/tonne, shows a >5% fall in the last five months for 27 month forward buying.



Source: LME website

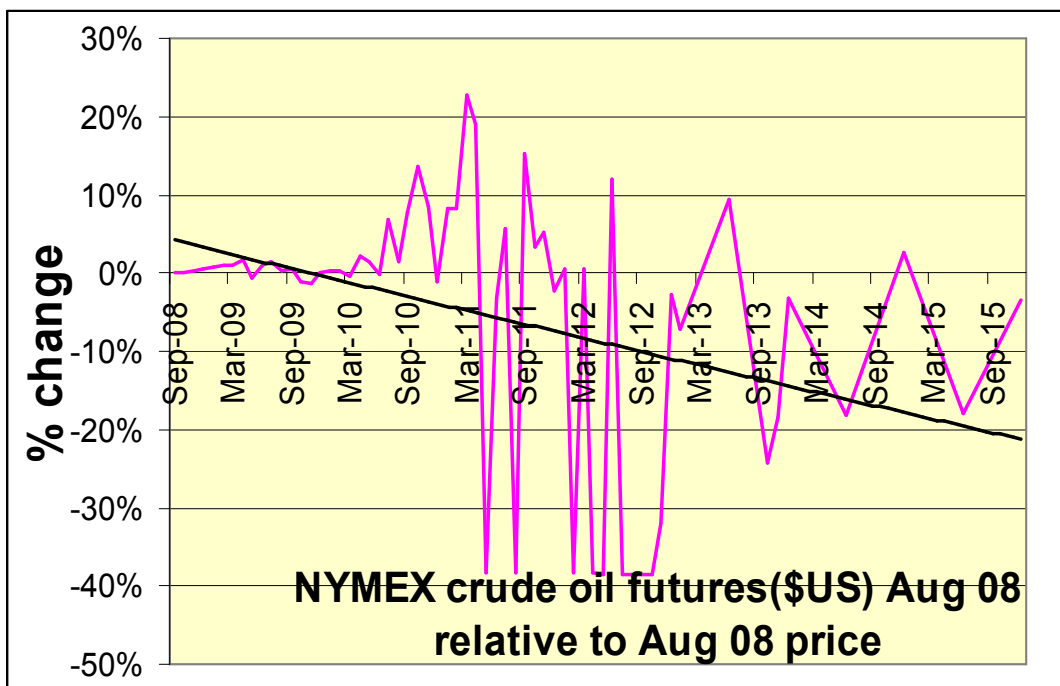
Copper, in \$US/tonne, shows a >10% fall in the last five months for 27 month forward buying.

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Source: LME

Future crude oil price shows a static view overall with some volatility. The price of crude oil has risen to \$US115/barrel since March 2008 when it was \$95/barrel but the futures market implies after this step change, that prices are trending down although there are some seasonal variations.



Source: Nymex

Whilst the new data does indicate that in some ways input prices could increase, they also show that some input costs are reducing. The AER needs to be aware of these developments.

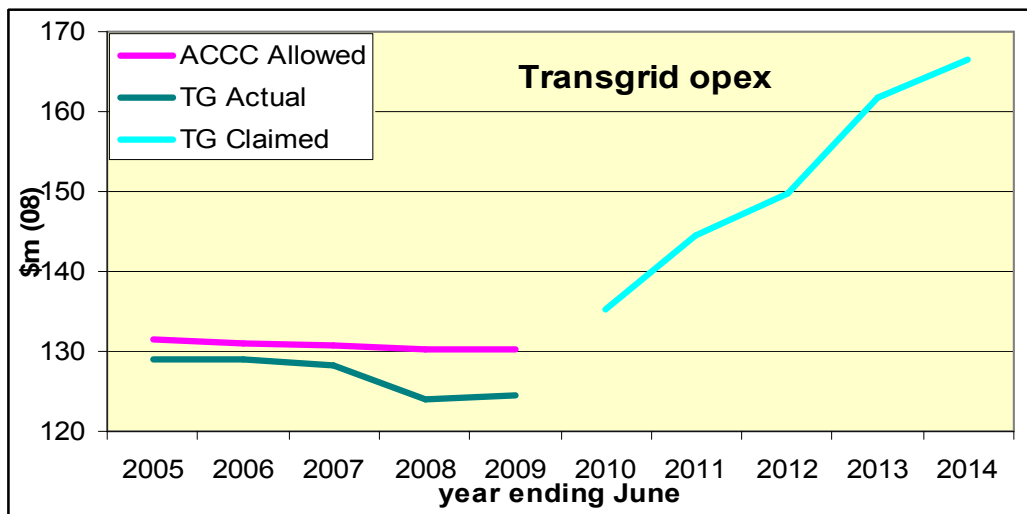
3. Forecast Operating Expenditure

The EMRF considers that, with such a significant increase in capex projects, TransGrid should be required to provide much larger efficiency savings in:

- Capex/opex trade-offs (i.e. larger opex savings)
- Larger productivity savings than the 2% applied by the ACCC in the current regulatory period for (new and more capital assets)
- Savings from maintenance programs no longer required on replaced assets.

3.1 Opex claimed is not demonstrably efficient

The following chart shows the historic ACCC allowed and actual opex, along with the claimed controllable opex.



Sources: ACCC decision 2004, TransGrid application

This chart highlights two very concerning trends.

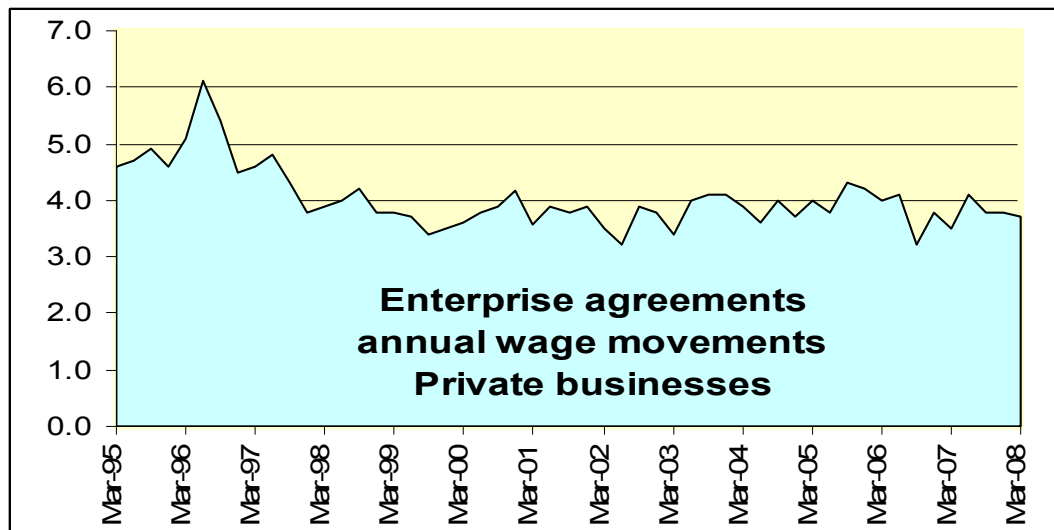
1. The concept of the EBSS is to create an environment where the regulated business is driven by incentives to achieve the maximum efficiency in opex. TransGrid has responded to this and has reduced its opex. However the starting point for the new opex should be the efficient opex achieved by the business, with adjustments for step changes. We in fact see a 10% step change between years but without justification for the step increase in costs. What we expect to see is a reduction in opex to reflect the large amount of capex, but this is not provided.
2. There is an expectation, driven by the observation from TransGrid past performance (and indeed that of other electricity businesses)

that opex is relatively independent of both demand and volume changes. That there is a massive trend upwards appears to be counter intuitive with historic actual performances. That this is the case is clearly demonstrated by the approach used by the ESCoV in its decision on the Victorian electricity distribution businesses in their analysis included in the draft and final decision in the 2005 Electricity distribution price review.

TransGrid points to the trend of Opex vs RAB which shows a clear trend downwards, but this is the same for all TNSPs. Rather than citing this as an indication of continuing efficiency improvement, EMRF would state that the reducing Opex/RAB is a clear indication of rapidly increasing RAB values awarded to TNSPs by the ACCC and AER. RAB increases due to capex should result in opex reductions, else the capex is not efficient. As consumers pay for capex, it is clear that consumers should see a reduction in Opex/RAB. For TransGrid to claim that this reduction is due to their efforts in increasing efficiency is clearly persiflage in its crudest form.

3.2 Forecasts of higher costs

TransGrid has been guided in the development of its application by the recent AER decisions for SP Ausnet in Victoria and ElectraNet in SA, that opex costs have shown a massive upward forecast trend in recent times. As Major Energy Users affiliates involved in those reviews pointed out in their submissions the actuality of the growth trends proposed to the AER had little justification. That this is the case recent labour growth rates show there is little change in average private business wage growth over the past decade



Source: RBA, table G7

This shows that average wage growth in Australia has been relatively static since the start of the current decade.

In its report last year to the AER⁴, Econtech points out that over the previous period the wages nationally in selected industries have moved (on average) in the following way

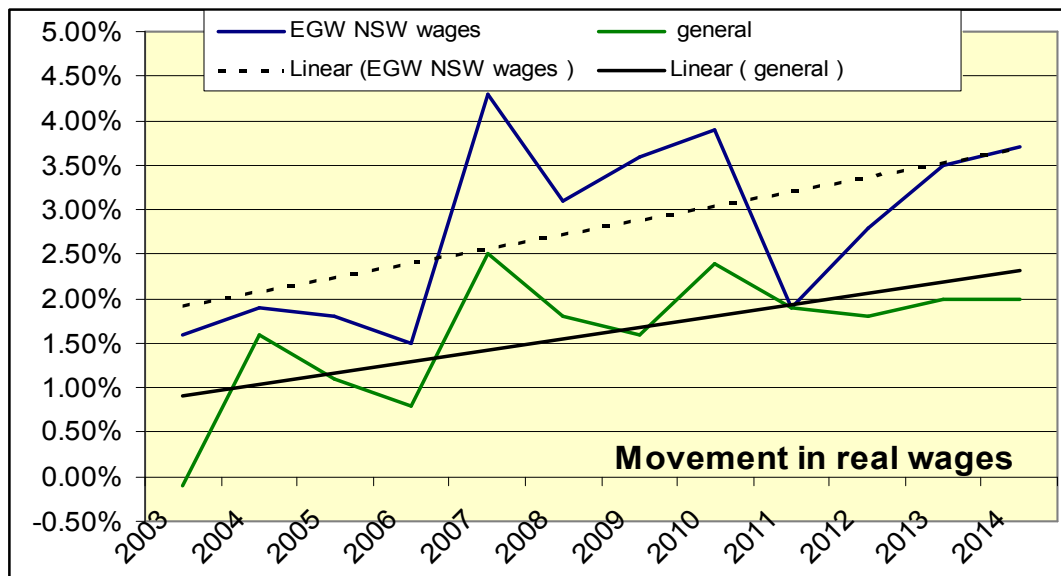
Table 6.3 (b)
Average Real Wage Growth in Australia (%)

	Mining	Electricity, Gas & Water	Construction	All industries
1986-1996	1.1	0.5	0.3	-0.3
1996-2006	1.7	2.9	1.0	1.7
2008-2014	1.1	3.7	2.1	2.6
2006-2016	1.1	3.2	2.1	2.2

Source: LCM

This data implies that the labour cost growth in the EGW industries exceeded average labour cost growth in all industries by some 120 basis points for the period 1996 to 2006 – the same period for which TransGrid has been corporatized. Econtech opines that for the next six years EGW wages growth will exceed the average by 110 basis points, a slightly lower premium than experienced in the previous ten years.

CEG⁵ provides forecast data (Table 26: Summary of escalation factors (year ended June)) for wages growth which can be shown graphically as follows.



Source: CEG table 26

⁴ Econtech Pty Ltd, Labour Costs Growth Forecasts, report prepared for the Australian Energy Regulator 13 August 2007

⁵ TransGrid application appendix F, Escalation factors affecting expenditure forecasts A report for NSW Electricity Businesses April 2008

The importance of this graph is that compared to average growth in real wages, EGW only maintains the differential between these two indicators that has applied for the previous decade. As can be seen from TransGrid's own opex trend, TransGrid has actually reduced opex during the latter part of the period of time for which Econtech observes that the differential between EGW and average wages was 120 basis points.

The clear import of this data is that TransGrid has been experiencing a premium of wages growth over average wage growth equivalent to that forecast by CEG, in its current regulatory period, and has reduced its opex at the same time.

This clearly implies that there is no basis to allow any premium for expected wages growth over the coming period, as there is no step change between the current period and the next period, in respect to wages growth.

4. Service Performance Targets

4.1 Overview

The service performance targets set for the current period have allowed TransGrid to secure quite large performance bonuses, and even with the poor performance (in relative terms) experienced in 2007, TransGrid still achieved a bonus, albeit quite modest. Overall TransGrid achieved better than benchmark performance in every category, and in every category achieved outperformance four or more times in each of the last five years. This clearly identifies that the current targets are too low and allow easy access to performance bonuses.

The EMRF contends that bonus payments for service performance have to be earned, rather than to be achieved because the hurdle is set too low. It is therefore pleasing to note that in three categories, TransGrid has suggested that the benchmark be made more challenging. In two cases (line and transformer availability, TransGrid has suggested that the benchmark be made less challenging, allegedly due to the planned increases in the capex program.

4.2 An observation of jurisdictional involvement

It is accepted that TransGrid has performed creditably with its overall performance, and advises that the service standards are to a large extent driven by direction from the jurisdiction. It is easy for a jurisdiction to set very high performance standards in the secure knowledge that it will not be held to account for the costs of achieving the outcomes of its directions.

What has been absent in setting performance standards is a risk analysis, and a comparison of the risks against the costs involved.

In South Australia the Electricity Supply Industry Planning Council (an independent body established by the SA government states in regard to the ElectraNet review undertaken by the AER in 2007,

“LIMITATIONS ON THE PLANNING COUNCIL’S REVIEW

The work of the Planning Council has focussed on only part of the capital investment program in ElectraNet’s revenue proposal. The review has covered the investment in major projects associated with network augmentation to reliably meet future demand. It is important to note that in reviewing the capital program, the Planning Council has not assessed, nor is it in a position to assess, the appropriateness of the quantum of costs associated with each project. The Planning Council understands that the cost estimates used by ElectraNet will be the subject of review by the AER’s consultants.”

This indicates that independent jurisdictional groups do not (and are probably not in the position to) analyse the costs of achieving a proposed performance standard and therefore cannot balance the risks associated with a capital project either not being implemented or deferred, and the impact of the jurisdictional performance standards set.

4.3 The detail

It is noted that in all cases (except frequency of loss of supply > 0.25 system minutes), the benchmark suggested is less than the average actually achieved over the past five years. As a minimum, the AER should not allow a bias in favour of earning a bonus, and past average performance should be the minimum point at which a bonus is achievable. To set the benchmark at a lower hurdle than past performance sets a view that the bonus is a right rather than something to be earned. An incentive regime is meant to encourage better performance, rather than reward mediocrity and a payment for maintaining status quo.

For the new period TransGrid suggests that it should reduce two key performance indicators (transformer and line availability) by some 40 basis points. TransGrid (having observed that the AER has in other reviews reduced benchmark performance levels to accommodate a large capex program) has learned that reduction in performance is acceptable if a large enough capex program is implemented.

The EMRF points out that in a competitive world a capex program (large or not) is not taken as a legitimate excuse for a lesser performance by a business by its customers.

Equally, the EMRF points out that TransGrid is in the process of completing a current regulatory period after having invested some 25% more in replacement assets than was allowed as the basis of the amount allowed by the ACCC in the current period. It also expended some 5% more overall than the ACCC allowed.

Despite this capex program TransGrid outperformed the performance benchmarks on transformer and line availability. The new investment should deliver some benefit to attaining service standards, yet this is not recognised in the new proposed benchmarks.

The EMRF also points out that if TransGrid could achieve its current performance (and earn the bonuses it has under its current capex program), then combined with the greater reliability generated by the current capex program, the likelihood of achieving outperformance against reduced targets is extremely likely.

The EMRF believes that the AER should not accept a reduction in the availability targets as proposed by TransGrid, and at a minimum, use the current average performance as the basis for setting performance for the new period. Additionally, if there is to be a bonus payment for outperformance (and EMRF supports that this be the case) it should be set at a level that incentivises better outcomes. To maintain performance levels without change yet give a bonus for doing this is not in keeping with an incentive regulatory regime.

5. Pricing Methodology

In the recent decision underpinning Chapter 6A of the NER, the AEMC has accepted the principle that transmission pricing is more a matter for users of the transmission network than for the TNSPs which recover their revenue regardless of the pricing mechanism used.

Pricing was not previously the province of regulators of TNSPs, but the changes to the NER (chapter 6A) now requires the AER to ensure that the prices developed by TNSPs are based on sound economic principles.

5.1 A shared network: the underlying principles

As consumers are the prime providers of funds to support the transmission network, they accept that having a jointly shared facility is by the far the most cost effective approach to the provision of a natural monopoly service. Not only would it be absurd for each user to have a separate supply arrangement for its provision of power, it is economically inefficient from a national viewpoint for this to occur. Having established that a joint facility is the most appropriate approach for infrastructure provision, there is an unstated but real requirement that the costs each user is liable for must be equitably shared and that the prices they pay are representative of the use they make of the shared facility.

Consumers see transmission pricing as an essential element of the AER regulatory reviews of TNSPs. Pricing is the allocation of the revenue streams into clearly identifiable elements so that consumers can readily see that the allocation of the permitted revenue is equitably allocated between all consumers representing the share of the cost of the provision of the transmission network. The outcome of this approach provides for all consumers to see that they each pay their equitable share of the jointly used assets. It also provides certainty that decisions made by each user (such as location, time of and frequency of use, and overall demand placed on the network) are adequately recognised by the user, and that no one user is effectively supporting less rational decisions by another user.

Inappropriate pricing of services leads to inefficient outcomes. A user that is convinced that it is paying too much for the service will take a number of actions to reduce its costs, perhaps leading to nationally inefficient outcomes. The user that is not paying its fair share for the service undervalues it and makes inappropriate use of the facility. Over allocation of transmission costs can lead to companies deciding to relocate overseas or close down, causing remaining users to provide that contribution from the business ceasing its operations. Equally, under allocation of costs results in the proliferation of occasional users who do not recognise that impact of the decisions they are making.

Consumers have observed that transmission companies have little incentive to make appropriate allocational decisions about their revenue. Their objective is

maximization of revenue. This does not mean that they have not attempted to allocate costs equitably, but that they have an incentive not to devote extensive time and effort into setting prices which are based on sound economic principles.

5.2 The TransGrid Approach

We have reviewed the TransGrid Pricing methodology and we are of the view that much of it is sound and follows the Chapter 6A Rules and the AER electricity transmission pricing guidelines.

However, we do have some concerns with aspects of the proposal put forward by TransGrid.

1. The clear implication of the Rules is that the prices should attempt to reflect the cost of providing the services. In this regard the AEMC commented in its final determination on pricing (page 25) that:-

“...it might be more appropriate for transmission prices to seek to approximate the long run marginal cost (LRMC) of providing transmission services. Such prices should reflect the need for, and cost of, transmission augmentation at a particular location in the future. This should work to deter potential consumers (loads) from locating in areas that will require costly augmentation later.”

The AEMC goes on to point out that where use of the LRMC might result in a customer electing to cease using the transmission system it considered that a discount up to the value of the SRMC should be available. To this end it provided for “prudent discounts”.

TransGrid seems to have attempted to ensure that it has allocated its costs appropriately into the various services. In its postage stamp pricing it has then elected to use a mix of allocatory approaches to recover these costs – by using a combination of demand and energy. The AER in its determination on transmission guidelines has noted that this is an acceptable approach as it states (page 20) that the pricing should be:-

“...such that a transmission customer with a load factor in relation to a connection point equal to the median load factor for all connection points within the region is indifferent to the use of either the contract capacity or the historical energy price. The lower of the two prices is to apply to the connection point.”

The EMRF points out that this approach is contrary to the concept that the pricing must reflect LRMC as determined by AEMC, as it clearly allows a customer to select the lower cost to it from a price based on energy or demand. As the LRMC is essentially derived from the demand placed on the system (and not the energy transported) then the AER is incorrect in

allowing a TNSP to set prices based on the lower of two essentially competing bases for cost allocation and recovery.

2. The Rules require costs to be allocated to one of five services – entry, exit, TUoS locational, TUoS non-locational and common. The AEMC recognised that it is possible that some services might provide for more than one service. This particularly applies in the case where entry and exit assets are shared and the AEMC notes this on page 37 of its final determination where it states:-

“...the Commission believes that where an asset provides multiple services, individual transmission customers should only be charged in respect of the *incremental* costs of providing the service over and above the cost of providing prescribed TUoS or common services.”

This means that where an asset provides more than one service, the TNSP must provide a mechanism where the costs are allocated between the individual transmission customers involved.

TransGrid observes that it will accommodate this requirement (section 6.5.1) by allocating:-

“In the case of a shared connection asset (such as a transformer) serving multiple transmission connection points, which may provide both prescribed entry services and prescribed exit services, the cost of the shared connection asset will be allocated to the appropriate category or categories of prescribed transmission services using an appropriate causal cost allocator.”

The EMRF considers that this approach is appropriate as the Rules require the costs to be allocated to the individual customers affected (ie shared by the individuals affected), and not for the costs to be allocated across all customers.

However, TransGrid should advise the details of the causal allocator. The EMRF considers that this should reflect the demand each party places on the assets, as demand is the basis for the size of transmission assets.

3. In its final transmission pricing Rules determination the AEMC made reference to the location of the “connection point” in so far as it relates to the point at which locational TUoS, non-locational TUoS and common services will be allocated. On page 41 of its FD, the AEMC states:-

“Therefore, where a connection point is located continues to be a matter for the TNSP and its customers to determine. The Rules do not preclude a transmission customer or customers agreeing with a TNSP on the location of the connection

point. In that regard, the Commission considers this to be a matter of detail and administration and is therefore not appropriate to be specified in Rules.”

The point at which these costs are to be assessed is a critical element for the allocation of costs and therefore the application of prices.

TransGrid has **not** stated the points in the networks where costs will be calculated and prices determined. The EMRF considers that the connection points for this purpose are the points where the allocation of entry and exit assets interface those assets which comprise the shared network and for which the costs for TUoS, non-locational TUoS and common services are developed.

Following this concept through, it becomes apparent that the term connection point needs greater clarification as there would appear to be multiple connection points for different purposes. For example:-

- The connection point for allocating costs for the use of shared assets (ie the TUoS locational component allocated on demand only, and the TUoS non-locational component and common services allocated on either demand or consumption), the connection point would be where the TransGrid shared services interface with the TransGrid entry/exit assets.
- The connection point for allocation of entry/exit charges is the point between the TransGrid entry/exit assets and the customers connected.

TransGrid needs to clarify this aspect in its methodology.

4. The EMRF notes that TransGrid proposes to use data from the last complete financial year as the basis for its price development. Although this is permitted by the AER guidelines it would appear to be clearly inappropriate when more recent data is available.

The EMRF believes that more accurate pricing would result if the data used was from the most recent 12 month period for which the data can be collected.

5. TransGrid notes that it does not consider that data applying to the “peak system” days is appropriate and proposes to use all data in a year as the basis for its methodology. The EMRF notes that the AER guidelines option 1 allows for this to occur.

TransGrid then goes on to further modify the pricing approach for TUoS locational prices. In this it cites support from EnergyAustralia which, in effect, considers that transmission pricing provides little assistance in convincing consumers to vary their usage pattern. This view does not

recognise that large consumers (>40 GWh pa consumption) are permitted a pass through of transmission costs. That this can occur does provide a signal for large consumers.

What is of concern to the EMRF is that the AEMC in its determination expected that pricing would be assessed when the system is most stressed. Based on this, the AER developed its option 2 which recognises that the most stress is most likely to occur during the hours of 11 am and 7 pm on the days of peak demand on the system.

The AER guideline would appear to allow the TNSP a unilateral decision to decide on the basis of what methodology will be used, and not allow customers any rights to select the approach they would prefer.

It is, therefore, inconsistent that a TNSP will allow customers to select the basis for making payment for non-locational and common services on the basis of what is the lower cost, yet not allow the same right for customers to select the basis on which it would pay for TUoS of the options available. In this regard whilst most customers are indifferent to the basis of the allocation (mainly those deeply embedded in the distribution network) some consumers might prefer to have their locational TUoS calculated on the basis of demand during the time when the system is most stressed. In fact, allowing this option has the potential to both encourage large consumers to load shift (which improves the system load factor) and the greater use of embedded generation which is a goal of the MCE, and has been a stated goal of AEMC as well.

In the development of the Chapter 6A Rules, the AEMC recognised that TNSPs are relatively indifferent to pricing methodology but that consumers can be influenced by a methodology that is well thought out and gives consumers an incentive to modify their usage to reduce the overall system peak loading. The TransGrid approach effectively denies consumers any benefit from doing so. The EMRF considers that consumers should have the right to select the approach to setting locational TUoS charges that allows them to minimise the costs they incur, following the pattern set by allowing customers to set their preferred approach to prices for non-locational TUoS and common services.

The EMRF is available to elaborate on, and discuss, the above comments, as they have important implications for economically efficient pricing of transmission for major users.