Response to the ACCC's Draft Decision on TransGrid's 2004/05-2008/09 Revenue Caps:

Section 2 of 6

Operating Expenditure Targets

July 2004

TABLE OF CONTENTS

SECTION 2 – TRANSGRID'S OPERATING EXPENDITURE TARGETS

2.1 Introduction

Since its inception, TransGrid has focused on minimising its operating costs while at the same time meeting its service delivery targets. As detailed in information provided to the Commission, and its Consultants, TransGrid has significantly reduced staffing levels and achieved reductions in operating expenditure.

As noted in Section 1 of this submission, TransGrid has adopted a deliberate strategy of keeping core staff numbers approximately constant in recent years and proposes to maintain this strategy over the next five years. It is TransGrid's assessment that this is the appropriate balance between containing operating costs and meeting the very real challenges emerging over the next five years.

The Commission's draft decision has effectively rejected this strategy and imposed the Commission's own assessment of the appropriateness of this balance. Significantly, this assessment is largely based on assumptions about the level and impact of future asset replacement and IT capital expenditure, without yet having completed the assessment of TransGrid's proposals for future capital expenditure in these areas.

As a responsible regulator, for the Commission to carry this position over to the final determination it must ensure that its judgement in this regard is based on a thorough understanding of TransGrid's business, and the balance that needs to be struck between sustainable, vital, service outcomes and operating cost reductions. This is an onerous responsibility. Before TransGrid management would choose to assume such a position, a thorough business process re-engineering assessment would need to be conducted to determine the merits of such a change. The Commission does not have the benefit of having completed such a review. The review conducted by GHD on behalf of the Commission falls well short of the scope and rigour that TransGrid would require before overriding its own experienced judgement on these matters.

The purpose of this section is to provide the Commission with confidence that TransGrid is an efficient transmission service provider and, given the right incentives, can be expected to continue to be so. This is done by clarifying information previously provided, and by providing additional relevant information. Proposals for improving incentive arrangements are also offered in order to assist the Commission in achieving its objectives without having to assume the full responsibility for setting operating efficiency targets on behalf of management.

Specifically, each of the following conclusions is explained in turn:

- the 2003/04 operating expenditure, adjusted for one off increases in labour capitalisation, should be used as the basis for determining a reasonable starting point for TransGrid's future opex targets. Audited accounts will be available to the Commission by September 2004 (prior to the final decision being made) and an unaudited outcome will be known with a high level of certainty within the next two weeks;
- the Commission has underestimated TransGrid's underlying cost increases over the next five years – meaning the Commission's 2% compounding efficiency target is applied to an inappropriate base scenario;
- the 2% compounding efficiency target is, of itself, excessive having regard for wider economy labour productivity gains; and
- adjustments to both the compounding efficiency target and operating expenditure incentive regime are required in order to provide operating expenditure incentive arrangements that are consistent with Code requirements. Such adjustments would result in an efficient outcome without the need for the Commission to assume responsibility for balancing service and cost outcomes on behalf of TransGrid management.

2.2 Actual 2003/04 Expenditure is Efficient and Should be Adopted as the Minimum Starting Point for Setting 2005 to 2009 Targets

In carrying out its own 'bottom up' assessment, the Commission adopted the 2002/03 financial year outcomes as a starting point and made explicit adjustments. The Commission then developed its own forecast for 2003/04. This was necessary because actual outcomes for 2003/04 were not available at the time that the draft decision was made. However, audited accounts will be available by September 2004 well before the Commission's final decision. A final unaudited outcome will be available before the end of July 2004 by which time all accounting reconciliations will have been completed and operating holding accounts will have been cleared.

However, if the Commission wishes to continue to adopt an approach that 'rolls forward' opex costs from 2002/03 then TransGrid submits that the Commission should:

- correct apparent errors in the way in which this roll forward is performed;
- note that applying the Commission's estimates of input cost inflation from 2000/01 gives a higher opex in 2003/04 than the Commission's starting point (suggesting the Commission's starting point effectively requires TransGrid to pass on material efficiencies over the regulatory period); and
- note that, to the extent that benchmarking can be relied on, it can be shown that TransGrid's current operating costs are efficient.

2.2.1 Correction to Commission Starting Point Calculation

The Commission's draft 2004 revenue reset determination has estimated TransGrid's opex, for the period 2004/05 to 2008/09 period, by first disaggregating opex costs in the base year into a number of subcategories. The Commission then rolls forward from the base year for each subcategory by a specific escalation factor, based on the cost drivers in each subcategory. This represents the Commission draft view of the long-run cost drivers for TransGrid's opex costs.[1]

In most subcategories the cost driver is limited to inflation, except in the following categories:

[1] We note that TransGrid strongly argues that the Commission's methodology does not correctly describe the long-run costs drivers in delivering electricity transmission services. Its primary criticism is that the Commission has taken no account of the increased cost of maintaining a growing network or such factors as the aging profile of employees.

- all labour related categories were increased by 4.1% pa based on an historical average of wage cost increases; and
- legal, insurance and travel costs which were escalated at a rate greater than inflation.

If the Commission were to again use this methodology to estimate TransGrid's opex in 2003/04, two apparent calculation errors should be corrected:

- a $1.55 million reduction in 2002/03 insurance costs should not be made; and
- 2002/03 costs should be rolled forward using the same factors applied from 2004 to 2009.

In addition, TransGrid believes the Commission should update its CPI estimate for 2003/04 to incorporate the March 2004 quarter data.

2.2.1.1 Insurance costs

In its draft decision modelling, the Commission removes $1.55m from 2002/03 insurance costs before it rolls forward to estimate 2003/04 costs. This appears to be an error based on the misunderstanding that TransGrid's actual 2002/03 audited accounts included $1.55m in self-insurance costs. This figure of $1.55m is equal to TransGrid's assessment of self-insurance costs consisting of insurance deductibles ($850,000 pa) and self-insurance of Towers and Wires ($755,000 pa). However, TransGrid's reported insurance costs relate only to actual insurance premiums paid for 2002/03 and do not include any amounts to reflect the cost of insurance deductibles or self-insurance.

Given these facts, the Commission was in error to remove an amount of $1.55m. Further, TransGrid has provided copies of Board papers relating to self-insuring the Towers and Wires risk of $755,000 to the Commission. Therefore, consistent with the Commission draft decision, it is now appropriate to add a further $755,000 to TransGrid's premium costs to reflect the expected cost to TransGrid of this self-insurance. These issues are discussed more fully in attachment 2A to this chapter.

However, in order to aid comparison with the Commission's draft decision figures which did not include this amount, all figures quoted in this chapter do not include the $755,000 self-insurance costs unless explicitly stated.

2.2.1.2 Indexation factors used

The Commission's modelling appears to only apply CPI between 2002/03 and 2003/04 in order to arrive at a 2003/04 starting point. This appears to be inconsistent with the Commission's acceptance for future years that wages (and some other input costs) grow at faster than CPI. TransGrid submits that there is no reason to assume that wages grew at CPI

between 2002/03 and 2003/04 – especially when actual wages growth is known to be 5% and when the Commission's own modelling in later years assumes wages grow at 4.1%.

Even if it were argued that wage increases above CPI are 'inefficient', a case that it is difficult to sustain, TransGrid will already suffer once under the current regulatory period if its cost increases exceeded 'efficient' cost increases. Failure to reflect those cost increases in the starting point for the next regulatory period effectively causes TransGrid to suffer twice as a result of any hypothetical inefficiency. In fact, failing to index by actual wage outcomes is tantamount to imposing an 'efficiency carryover' by stealth. Given the Commission has not identified any inefficiency in TransGrid's current wage outcomes and nor has it proposed an efficiency carryover there is no apparent justification for not indexing by actual wage outcomes between 2002/03 and 2003/04.

Similarly, there is no reason to escalate other costs, such as legal costs, at less than the Commission forecasts.

Applying the same assumptions to the escalation of 2002/03 actuals (with the $1.55m insurance premiums re-inserted) as the Commission assumes for the next regulatory period gives a forecast for 2003/04 of $117.6m using a WCI of 4.1% and $118.4m if actual wage growth of 5.0% is used.

2.2.2 Rolling forward from 2000/01

Using the cost drivers identified by the Commission in its 2004 draft determination to roll forward TransGrid's 2000 costs, TransGrid's benchmark opex would be $121.7m in 2003/04.[2] This is $4.1m above the Commission's corrected opex starting point of $117.6m in 2003/04.

However, TransGrid's total 2002/03 opex figures underestimates the efficiency gains made by TransGrid's management, as there has been significant exogenous cost increases during the period.

One obvious example of a cost outside the control of TransGrid's management is insurance premium costs. TransGrid purchases insurance from a competitive market and does not exert material control over this cost. Furthermore, after the terrorist attacks on 11 September 2001 insurance costs have risen markedly. In TransGrid's case it has resulted in premiums rising by about 65% to $5.1m in 2002/03.[3] Removing the above forecast cost increases in

---

[2] Including $3m for the additional costs of operating the transmission assets purchased from the Snowy Mountains Hydroelectric Authority (Snowy assets) in 2001.

[3] We note that there was no increase in insurance costs in the 2001/02 year, due to TransGrid already have settled insurance contracts before 11 September 2001.

insurance ($1.8m in 2002/03) shows TransGrid delivered efficiency gains of $6.2m by 2003/04 (an efficiency saving of 5%).

While an adjustment has been made for increased insurance costs there are a number of other cost categories that have also increased due to external changes in TransGrid's operating environment and not through poor management. Other exogenous cost increases include:

- the introduction of Demand Side Management payments - $0.5m;
- increased vegetation management costs - $2.2m ; and
- a very significant impost on TransGrid since December 1998 has been the accommodation of a range of specific new functions required by the National Electricity Code without a diminution of other responsibilities. The scope of these functions was not fully appreciated or explicitly considered during the Commission's previous review of TransGrid's operating expenditure needs. These include:

    - network pricing systems to implement Code requirements for cost reflective network pricing;
    - administration of extensive public consultation processes including the Annual Planning Review, contribution to NEMMCO's Statement of Opportunities, and administration of the regulatory test;
    - management of the connection agreement process as required by the Code; and
    - administration of the Code change and Code compliance processes.

    Together these functions have resulted in the need for new skilled resources and organisational commitment valued at about $3 million per annum.

Accounting for these additional exogenous cost increases of $5.7m, the Commission's corrected starting point delivers to customers an effective efficiency gain of about $12m between 1999/2000 to 2003/04 (or 10%).

TransGrid also expects that, when adjustments for one-off increase in capitalised labour are made to TransGrid's actual 2003/04 operating expenditure figures they will be in the vicinity of the point derived from correctly rolling forward 2002/03 actuals. This should give the Commission comfort that the 2003/04 actuals costs will reflect efficient costs.

2.2.3 TransGrid is Relatively Efficient.

Section 2.3.2 below explains why errors and omissions in the Commission's benchmarking analysis makes TransGrid appear relatively less efficient than it really is. When these errors

and omissions are corrected, including accounting for non-augmentation capex, TransGrid appears to be highly efficient relative to its peers.

2.3 TransGrid's Underlying Cost Drivers

The Commission's forecasting methodology captures increases in opex costs due to real growth in some input prices but fails to capture all the increasing cost drivers TransGrid faces, including:

- Increasing responsibilities in terms of new assets under management. TransGrid's planned replacement capex does not offer any 'protection' against these cost increases.
- Ageing profile of TransGrid's (and the industry's) workforce;
- Wage costs growing faster than the Commission has allowed;
- An apparent modelling error in the Commission's projections from 2007/08 to 2008/09.

2.3.1 New Assets Under Management

In its application TransGrid used a 'cost per maintenance unit' approach to argue that increasing numbers of assets under management will increase its operating costs. However, the Commission was unconvinced by the 'high level' nature of this analysis so TransGrid has undertaken a more forensic analysis. The conclusions of this analysis are that:

- new transmission lines and substations will add at least $1.35m pa to TransGrid's operating costs (or around $6.8m to TransGrid's opex over the five years); and
- proposed expenditure on replacement/refurbishment of existing assets will not have a material impact on the operating expenditure associated with those assets.

The analysis that follows focuses on the direct maintenance cost impacts of additional assets. It does not include the real and material impacts on planning, operations, and information technology support associated with the assimilation of new assets. Some impact on indirect costs is inevitable. For example, management review of the performance of new assets and costs associated with their management is necessary, implying additional management resource impacts. There are also associated cost impacts on planning, system (network) operations and information systems associated with assimilation of new assets that are material but have not, as yet, been quantified.

2.3.1.1 Transmission Lines

TransGrid currently has 12,420km of transmission lines. An analysis of the maintenance costs associated with transmission lines shows that 40% is related to easement and access track maintenance, 15-20% on inspections and patrols and 25-30% on maintenance of the line

itself (the other 15% relates to underground cable maintenance and maintenance resource planning). Thus up to 60% of the costs are not related to the condition of the line structures and hardware, but are related to the need for ongoing patrols and the environment in which the line is located. This latter work is required regardless of the age of the asset, and hence any new assets immediately begin incurring these additional costs as the patrols and vegetation works need to be carried out.

Ongoing easement maintenance costs are typically incurred from the initial commissioning of a line. This is a result of a number of factors:

1. Contemporary transmission lines are constructed using limited and selective clearing techniques to restrict environmental impact. This often involves lopping and tree removal, however when trees are removed the stumps are left in situ to prevent soil erosion and chemicals are often unable to be used to prevent re-growth.

2. The initial re-growth is usually fast and dense due to the natural regeneration response of the native bush. This usually results in higher costs in the early maintenance cycles.

3. In the initial clearing, prior to stringing, accurate tree removal and lopping is often not achieved due to the absence of conductors for reference. Some re-clearing is usually necessary soon after commissioning to establish the correct 'tree profile'.

4. The initial clearing begins typically 12 to 18 months prior to the completion of the line. At the time of commissioning, re-growth on the initially cleared spans is well underway and already part of a routine maintenance cycle.

5. Access tracks built for construction are often temporary for 'one-off movements'. They then need subsequent upgrading to 4-wheel drive standard for routine inspection activities and ongoing maintenance thereafter.

TransGrid plans to construct 1,350 km of new transmission lines over the coming 5-year period. These new lines will incur recurring additional expenditure – based on historic costs, the average maintenance cost of a transmission line is of the order of $850 per km per year. For new lines, the marginal cost of additional maintenance excluding easement maintenance is expected to be 30% of this figure (inspections and patrols and some limited maintenance), or $255 per km. This is expected to add $0.65 million to TransGrid's maintenance costs over the next 5 years.

In addition, there are the additional easement maintenance costs that are typically experienced in the initial years of new transmission lines. This is more difficult to estimate as the amount of tree clearing is dependent on the type of terrain encountered. As these new constructions are still required to go through route selection, community consultation and environmental impact studies, it is difficult to be definite about the amount of easement

maintenance work required. However, using the figure of $2,000 per span and assuming 10% of spans on new lines constructed will incur this additional expenditure in any one year, it is expected that approximately $1.7 million in additional expenditure will be incurred over the 5-year period.

A tabulation of the expected maintenance costs for new lines to be constructed post 2004 is provided below in table 1:

Table 1

Fin. Year	Routine Maintenance ($k)	Additional Easement Costs ($k)	Total Additional Opex ($k)
2005	0	0	0
2006	15	40	55
2007	48	127	175
2008	243	640	883
2009	342	900	1,242
Total	**649**	**1,707**	**2,356**

2.3.1.2 New Substations

TransGrid currently has 81 substations. An analysis of the maintenance costs associated with substations shows that substation equipment related maintenance work accounts for 40% of the total costs, with 60% of the total costs relating to site inspections, property maintenance and resource planning. A significant proportion of this latter work is required regardless of the age of the asset, and hence any new assets immediately begin incurring these additional costs as the inspections and property maintenance (such as grass cutting, pest control etc) need to be carried out.

An analysis of maintenance expenditure for existing substations over the period 2000 to 2004 shows an increasing trend aligned with the increase in substation assets, and particularly the increased focus on securing these assets. On a normalized cost per equivalent circuit end, the cost is $6,520 per year per equivalent circuit end.

The variability of maintenance costs at any one substation is demonstrated by examination of a particular case study. Sydney West 330/132kV substation was established in 1965 and consists of five equivalent three-phase transformers with an installed capacity of 2100 MVA. Over the period 2000 to 2004, the annual maintenance costs at this particular substation varied from $250,000 to $650,000, with an average cost of $420,000 per year. On a normalized cost per equivalent circuit end, the average maintenance cost at Sydney West is $6,350 per equivalent circuit end, consistent with the average across all substations.

The following table 2 provides an indication of the costs incurred for each of the new substations constructed in the last 5 years.

Table 2

Substation	99/00	00/01	01/02	02/03	03/04 YTD
Regentville (1998)	23,992	87,879	52,619	96,127	121,593
Balranald (2000)			517	31,551	35,381
Gadara (2000)			12,897	26,732	7,674
Molong (2001)			13,494	13,355	14,372
Dumaresq (2000)			51,381	59,619	36,704
Nambucca (2001)			6,649	8,737	34,534
Totals All new subs since 1998	23,992	87,879	137,558	236,122	250,258

The average maintenance cost per equivalent circuit end for these new substations is $3,100 per equivalent circuit end per year. It is expected that over the coming 5-year period, the costs associated with these substations will trend up towards the average cost of existing substations, averaging $4,800 per circuit end per year, thereby adding another $600,000 to the maintenance costs.

Excluding Haymarket Substation, TransGrid plans to construct 7 new substations (comprising 84 equivalent circuit ends) over the coming 5-year period. These new substations will incur recurring additional expenditure – based on historic costs in the early years of recently built substations, this would be expected to be of the order of $3,100 per equivalent circuit end per year. This is expected to add $600,000 to TransGrid's maintenance costs over the next 5 years.

2.3.1.3 Haymarket Substation

The most significant impact in terms of new assets will be the MetroGrid project. The MetroGrid project incorporating Haymarket substation is a critical factor in securing a reliable supply to the Sydney CBD. The routine maintenance required at Haymarket will be determined by the maintenance policy and will be consistent with other substations:

- substation inspections,
- environmental inspections,
- general transformer and reactor maintenance,
- OLTC maintenance,

- transformer cooling system maintenance,
- gas insulated switchgear (GIS) maintenance,
- Cable No. 42 patrols and maintenance (including "Dial before you dig" enquiries), and
- overall protection, metering, control and communication maintenance.

The estimated cost of this routine maintenance is $400,000 per year.

In addition, the following items unique to MetroGrid will be provided by external service providers. The specifications are currently being prepared so the following annual figures are estimates only:

- building air conditioning plant - $20k
- building chillers - $10k
- building fire protection - $30k
- building security system including CCTV system - $20k
- building internal goods lift - $5k
- building 100 tonne crane service and inspections - $5k
- general Haymarket building and service maintenance
    - general cleaning of site - $15k
    - gas sensors - $5k
    - sump pumps - $5k
    - external security doors - $3k
- tunnel inspections and maintenance including water pump maintenance - $50k
- tunnel ventilation system inspection and maintenance - $20k
- general building and service maintenance at Sydney Park, ATP and Maryanne St - $20k
- maintenance and testing of water treatment plant at Sydney Park - $40k

Total expected operating costs for MetroGrid is $650,000 per year. This figure is low by comparison with other companies' new assets. For example, in relation to Murraylink, the Commission recognised operating costs of around 3% of the regulatory asset value. On this basis the additional maintenance costs associated with MetroGrid would be about

$8.1 million p.a. This relatively low cost is, in part, attributable to the additional capital expenditure undertaken in relation to MetroGrid as set out in the report to the Commission entitled "MetroGrid Supplementary Report to the Commission".

2.3.1.4 Summary

Overall, opex associated with new substations and new lines is expected to increase by a minimum of $6.8 million over the 5 years (or $1.36m per year) due to:

- new transmission lines $2.4m additional costs;
- recently built substations reaching maturity adding $0.6m additional costs;
- new substations (excluding Haymarket) adding $0.6m additional costs;
- Haymarket Substation adding $0.65m per year in additional costs.

This is summarised in the below table 3

Table 3

Year	1 ($m)	2 ($m)	3 ($m)	4 ($m)	5 ($m)
Impact on maintenance costs of more complex network associated with new assets	Not included	Not included	Not included	Not included	Not included
Impact of maintaining more substations	$0.8m	$0.8m	$0.9m	$1.0m	$1.0m
Impact of maintaining more lines	$0.0m	$0.1m	$0.2m	$0.9m	$1.2m
Total impact on costs	**$0.8m**	**$0.9m**	**$1.1m**	**$1.9m**	**$2.2m**

2.3.2 Substitution of capex for opex

The Commission draft decision uses this potential substitutability between opex and capex as a rationale for not providing TransGrid with any compensation for additional costs incurred in maintaining new assets.

> *"TransGrid has repeatedly asserted that significant investment in the network necessarily implies a higher opex allowance.[9] The Commission has not analysed the relationship between opex and capex in TransGrid in detail but notes the following:*
>
> - *A significant proportion of TransGrid's capex is to "support the business" and includes investment in IT and business systems the principal purpose of which is to improve efficiency and productivity. The business case for much of this investment relates the capital investment to the operating cost savings that result from such investment. In such cases, capex and opex ought to be inversely related;*

Much of the augmentation expenditure proposed by TransGrid is in the augmentation of existing installations, as opposed to the construction of new transmission lines. In the case of such investment,

the operating and maintenance cost per unit should decrease not increase, particularly after taking account of the fact that older and higher maintenance equipment is being replaced by modern, lower maintenance equipment;

- *In augmentations that increase the capacity of the network, TransGrid appears to have invested heavily in modern monitoring and automation systems. For example, TransGrid claims that the new Haymarket substation, its biggest ever substation investment "will be one of the most highly monitored and automated substations in the world"[10] These investments can be expected to considerably reduce the expected maintenance and operating cost burden, particularly in the early life of these assets; and*
- *TransGrid has invested a significant amount in the replacement of existing infrastructure. Again, per unit, the replacement of old equipment for new equipment can be expected to deliver decreases in operating costs.*

> *"In view of this, the Commission considers that it is reasonable to suggest that any increase in operating and maintenance costs that may arise because TransGrid has a longer length of line or cable to maintain, will be more than offset by decreases in opex attributable to the above factors."* (Page 30.)

In the above quote the Commission makes a number of statements which TransGrid considers are incorrect. Before presuming that TransGrid will gain material opex reductions as a result of its capex programs, the Commission should analyse the relationship between opex and capex in TransGrid in detail. The following facts are provided below to assist The Commission in this analysis.

2.3.2.1 Replacement/refurbishment capex

The capital replacement of equipment currently planned by TransGrid will not reduce the age profile of the equipment. For example, the average age of transformers in TransGrid's network in 2003 was 29 years. With the planned replacement of existing transformers (and not allowing for new transformers as a result of capital augmentation projects), the average age of transformers would increase to 33 years in 2008. Similarly, the planned replacement of circuit breakers will see the average age increase from 17 years in 2003 to 18 years in 2008.

TransGrid's proposed capex (replacement and life extension) is mainly a response to plant condition with the objective being to avoid in service failure. The major impact of this action would be to improve reliability (service standards) and in some cases to maintain a safe work place (for example, the replacement of equipment that has a high risk of explosive failure).

The replacement of air blast circuit breakers (CBs) is an example of a capex program identified that will result in a material (but small) reduction in opex. Air blast CBs are an obsolete technology which has been prone to a number of in service problems leading to high maintenance costs and are no longer supported by manufacturers. TransGrid

commenced this strategy in 1992 and over 200 CBs have been replaced to date. The replacement of these type of CBs with newer SF6 CBs has resulted in reduced routine maintenance requirements on the CBs, as well as avoided maintenance by decommissioning of the associated compressed air systems. However, the replacement program is 95% complete and most of the savings from this strategy have already been realised.

TransGrid's proposed replacement capex program primarily involves replacing existing equipment with like equipment. This has minimal impact on the routine opex as the maintenance routines are largely the same. There may be some savings from a reduction in defect repair costs, callout-related overtime and adverse impacts on planned work thereby providing incremental efficiency improvements but this is generally a small saving unless there is a material reduction in the average age of assets. As noted above the average age of TransGrid's existing assets (after accounting for replacement/refurbishment) will increase marginally over the next regulatory period. The avoidance of major failures provides potential savings, however prudent asset management has eliminated the bulk of these major failures such that there is little saving to be realised.

Further, and as already discussed, an analysis of the recurring operating expenditure for Network for 2002/03 (that is, routine opex excluding major operating projects) shows that less than half the expenditure is related to the condition of the electrical equipment, with over 50% relating to site inspections and easement and access track maintenance. This non-equipment related work will not be affected by capital expenditure programs.

Based on this analysis it would be unreasonable to reduce TransGrid's opex allowance on the basis that one could expect any savings as a result of its replacement/refurbishment capex.

2.3.2.2 Information Technology Capex

The IT capital program has been divided into projects which are new systems or initiatives and those that are primarily replacement of de-supported infrastructure or upgrade of systems. The proportion of the IT capex program that is for replacement of de-supported equipment or upgrade is:

- 75% for the program 2004 to 2008; and
- 60% for the program from 2000 to 2004

The expected life of IT investments in TransGrid is reflected in the depreciable period of the assets. In TransGrid the depreciable life is:

- 4 years for server and infrastructure and main systems; and
- 3 years for personal computers.

The life of these systems reflects the rapid changes in technology and the period of time that computer vendors will provide support for the solutions. The capex to refresh most of the IT solutions do not provide opex savings but simply allows the continuation of operation of the systems. Upgrade of the payroll, general ledger or email systems and the infrastructure on which they run do not provide additional opex savings but continue to allow the organisation to run these functions with a fraction of the staff that old manual processes required. The benefits of automating these processes can only be achieved once and must be sustained through support of these systems.

As businesses in general and TransGrid specifically automate more and more of their business processes IT becomes pervasive and more and more of a commodity that needs to be refreshed to keep delivering these benefits. These systems can be compared to a fleet of motor vehicles that has a defined replacement cycle. When a motor vehicle is replaced no one asks what additional reductions in costs will be delivered even though the car runs faster and has more features. The replacement just continues to provide the substantial benefits over the manual process of walking.

The replacement of infrastructure such as servers and routers and switches on a periodic basis is driven primarily by vendors who are only prepared to support hardware and software for a limited number of models. As new releases of equipment become available the cost to these providers in supporting spare parts and software compatibility on huge ranges of equipment is prohibitively costly. When this equipment is replaced it will usually run faster and have additional capability and is often cheaper than the models it replaces but it will still only carry out the same function and does not provide opportunities for opex reductions.

The other category is replacement of application software and databases. TransGrid believes that the most cost effective delivery of IT systems is through the use of standard externally provided solutions. Replacements or upgrade of these systems are also determined largely by the companies who provide the solutions.

Microsoft and Oracle for example are huge multinational companies who only support the current version and one previous release. TransGrid runs most of its large business systems on the Oracle database. Oracle have a very structured de-support method. Should TransGrid have an error in one of its systems, eg its customer billing system TUOS, after the de-support of a version Oracle will not even take a support call. This data base example is further complicated by the fact that only certain versions of the data base will run on a release of the server operating system and these will only run on certain releases of the applications such as Mincom's ERP. The upgrade of these systems will continue to provide a reliable set of software that supports the automated business processes of the organisation.

The investment in IT over the next regulatory period is predominately in the refresh of existing systems to continue to provide the same level of automation. The IT investments required to make significant opex savings would involve significant reviews of organisation

business processes to utilise new technologies. These would be significant changes and require large organisational change management initiatives. TransGrid is open, in principle, to this level of change but it currently is not in the IT program proposed. This also illustrates a link between the assumptions made by the Commission in relation to opex saving due to IT capex and the capex allowance to be included for TransGrid in the next stage of TransGrid's Revenue Decision process.

TransGrid is also of a view, as discussed in more detail below, that TransGrid would not be provided with an adequate commercial incentive from its share of the of the opex benefits for such investment to be commercially viable.

2.3.3 Ageing workforce

The age profile of the organisation presents significant resource issues for the organisation and as a consequence additional expense. The average age of the organisation is 44.5 years with average years of service being 20.5.

In general the positions that are becoming vacant due to natural attrition are predominantly more senior positions that contain a managerial/leadership or a technical/specialist focus. These positions have a profound effect on the achievement of business objectives and therefore require candidates who possess the requisite skills and extensive experience that will enable them to perform the full duties of the position. Given the specialist nature of the electricity transmission industry, these positions are difficult to source externally and are frequently filled by internal applicants who possess the relevant skills and experience.

This method of recruitment creates "consequential" vacancies in lower level positions. These lower level positions still have an important role in ensuring that business objectives are met and demand a level of expertise that is also not readily available in a restricted external market.

The principal strategy to alleviate this skill shortage is to recruit externally to a range of "development" positions. These positions will enable the incumbent to acquire appropriate competence to provide a suitable resource for subsequent appointment to these "consequential" vacancies. If this strategy of resource planning is to be effective and business objectives are to be achieved, the filling of these development positions should occur prior to the vacancies occurring in the senior roles.

The basis for the number of development positions required is the forecast natural attrition rate in the more senior roles with the timing of the recruitment process being based upon the development periods required for each "consequential" position created.

It should be noted that the classifications of administrative officer and power worker have been excluded from this strategy as it has been found possible to source candidates with appropriate competence from the external labour market.

The additional expense in this instance is related to:

- initial recruitment,
- training and development of recruits
- related administration expenses

Evidence of the implementation of these strategies is provided by the increasing percentage of development positions in the total establishment numbers over previous years. Development positions have doubled to more than 80 over the past regulatory period. Given the age profile of the organisation this will be an ongoing trend.

The costs associated with the ageing workforce will be material but are difficult to quantify and have been conservatively excluded from our analysis.

2.3.4 Wages growth

As noted earlier, the Commission in developing its starting point for operating expenditure has used the 2002/03 outturn costs and extrapolated all costs forward to 2003/04 using CPI indexation. The Commission then forecasts forward from 2003/04 using specific forecasts of input cost increases for each category of costs. For labour costs, the Commission uses an estimate of 4.1% based on historical increases in the ABS wage cost index since its inception.

TransGrid believes that the Commission should review its decision to index labour costs by inflation (to 2003/04) and then 4.1% for the following years. In this section we provide detailed evidence which supports a more cost reflective increase. TransGrid's revenue application notes that the primary input cost affecting operating expenditure is industry wage costs. TransGrid does not and cannot control the wider market for labour and the NSW power industry labour market within which TransGrid operates. The analysis provided to the Commission's consultants reflected this reality. The Commission is again asked to recognise, in principle, the importance of industry wages costs as a key driver of TransGrid's operating costs.

Enterprise agreements over recent awards in the NSW power industry have averaged 5% per annum nominal growth for the last four years. These increases are in line with other industry averages. Details of Power Industry Award increases since 1999 have previously been provided to the Commission and the Commission's consultants.

On this basis the starting point for labour related costs between 2002/03 and 2003/04 should be an increase by 5% (the actual award payment made by TransGrid to its staff over that period) and not simply the inflationary increase currently allowed. The Commission has, to some extent, acknowledged the impact of higher wage costs than the level of inflation by using a higher rate in their draft decision for the 5-year period from 2004/05. Logically, a

comparable higher rate of cost indexation should also be used in projecting 2002/03 opex outcomes to achieve opex estimates for the 2003/04 period.

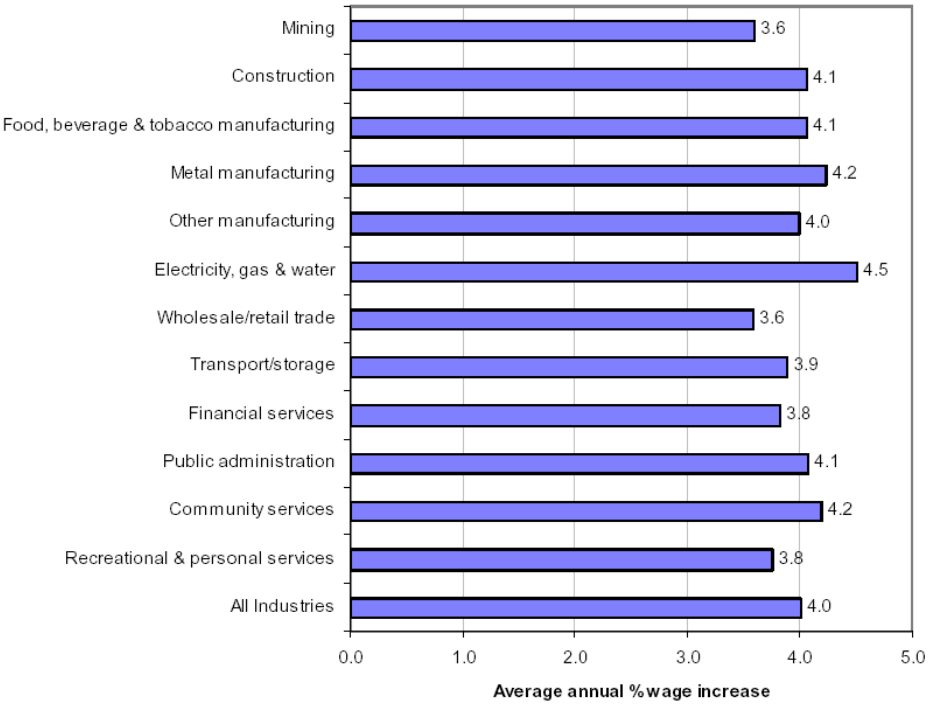
Even if it were argued that TransGrid's wage increase was 'inefficient', TransGrid will already suffer once under the current regulatory period if its cost increases exceeded 'efficient' cost increases. Failure to reflect those cost increases in the starting point for the next regulatory period effectively causes TransGrid to experience an inefficiency double count. In fact, failing to index by actual wage outcomes is tantamount to imposing an 'efficiency carryover' by stealth. Given the Commission has not identified any inefficiency in TransGrid's current wage outcomes, nor has it proposed an efficiency carryover, there is no apparent justification for not indexing by actual wage outcomes between 2002/03 and 2003/04.

TransGrid is a NSW electricity transmission business. As a consequence, TransGrid's labour costs are driven by NSW wage costs in the electricity sector. The most accurate source of information to forecast nominal wages growth in the NSW electricity supply sector suggest industry wages growth of between 4.5% and 5.0% pa.

ACIRRT is based at the University of Sydney and is the premier body for research into workplace relations and has the most up-to-date database of wage outcomes in Australia. ACIRRT (2004) [4] state that during the December quarter 2003 the Australian electricity, gas and water sector continued to lead wage increase outcomes, climbing to 4.5%, compared to 4.4% in the September quarter 2003. This is demonstrated by Figure 1 which details wage outcomes in current collective agreements. This data is consistent with current wage outcomes delivered across National Electricity Sector, (refer Table 4) as well as the NSW Electricity Sector (refer Table 5).

[4] ADAM Database, 2004, ACIRRT, December 2003 Quarter, University of Sydney.

Fig 1. Wage Outcomes In Current Collective Agreements



Source: ADAM Database, 2004, ACIRRT, University of Sydney, (n=1711).

This represents the third successive quarter that the electricity, gas and water sector has lead industry and sectoral wage outcomes[5]. Wage outcomes in electricity, gas and water are currently 0.5% above the average for all industries.

While a range of factors is contributing to this, an undoubted explanation is the ageing of the workforce in the electricity industry. As already discussed, TransGrid is facing significant loss of its skilled workforce as a result of retirement as its workforce ages. All other firms in the electricity sector nationally are facing the same problem (see SPI PowerNet submission on its revenue determination). The natural forces of supply and demand mean that the real wages that must be offered to fill positions must be increased.

A recent benchmark comparison of average annual wage increases paid under registered certified Agreements / Awards across all States (excluding New South Wales), was conducted by the Workplace Relations branch of TransGrid during April 2004. The results of this benchmark comparison are outlined in Table 4.

[5] See ADAM Database, 2004, ACIRRT, No. 40, March 2004, University of Sydney, ADAM Database, 2003, ACIRRT, No. 39 December 2003 Quarter, University of Sydney, ADAM Database, 2003, ACIRRT, No. 38, September 2003, University of Sydney.

Table 4. Current Wage Outcomes - Electricity Sector (Excluding NSW)

State/Territory/Organisation	State Average
VIC	4.63%
WA/ACT/SA/TAS/QLD	4.40%
Average non NSW	4.51%

This is consistent with ACIRRT data contained on Figure 1.

In the NSW Electricity Sector, the average annual percentage wage increase available under Awards/Enterprise Agreements is currently 4.75% per annum. Table 5 presents a summary of current wage trends within the NSW electricity industry.

Table 5. Current Wage Outcomes NSW Electricity Sector

	Duration of Award/Agreement	Av % payment per annum	Total % payment
Company			
Country Energy	2 Years	5.0	10.0
Delta Electricity	2 Years	4.5	9.0
Energy Australia	2 Years	5.0	10.0
Eraring Energy	2 Years	4.5	9.0
Integral Energy	2 Years	5.0	10.0
Macquarie Generation	3 Years	4.5	13.5
TransGrid	2 Years	4.75	9.5
Industry Average		**4.75**	

The annual average wage outcome calculated across the industry as of June 2004 is 4.75% per annum. This represents 0.25% higher than the wage trend outcomes contained in Figure 1.

The most recent Award negotiations to occur in NSW have involved Eraring Energy and TransGrid. These negotiations resulted in a 9% increase over two (2) years for Eraring Energy two x 4.5% payments), and a 9.5% increase over two (2) years for TransGrid (5% plus 4.5%).

In summary, TransGrid notes that all the available evidence suggests that the industry wide rate of growth in wages in significantly in excess of the 4.1% figure used by the Commission in its draft decision. In particular, the ACCIRT databases suggests national wages growth of 4.5% in the electricity sector. This is consistent with review by TransGrid's workplace relations branch (the full details of which can be made available to the Commission) of agreements struck nationally. More particularly, in NSW no business has successfully negotiated a wages outcome less than 4.5% per annum – with all agreements being between 4.5% and 5.0%.

On the basis of the above analysis TransGrid submits that the best estimate of wages growth in the industry, from which TransGrid sources its labour, is between 4.5% to 5.0%. TransGrid believes that, consistent with its own wages growth agreement, 5% is the appropriate value to adopt. However, at a minimum TransGrid believes the Commission should adopt an assumption of 4.75%. An assumption of 4.1% is simply not justified by the available facts. Adopting 4.75% instead of 4.1% in the forecasting of future labour costs results in around an additional $0.6m in operating costs per annum.

2.3.5 Apparent Modelling Error in the Commission's Projections from 2007/08 to 2008/09.

In the calculation of the Operating Expenditure allowance for 2008/09, the overall increase in the Commission's projections is only around 2.5% compared with an increase in other years of around 3.8%.

A review of the components indicate that all components of expenditure in 2008/09 have only been increased by inflation compared with the four earlier years where individual components have be escalated at the rates defined in the draft Decision.

As there is no explanation for this change in the draft Decision document, it can only be assumed that there has been an error in the calculation of these figures. The Commission is requested to review their calculations and make any required corrections.

2.4 Commission's Imposition of an Arbitrary Cost Reduction Target

TransGrid has adopted a target of zero increase in the number of staff involved in the operation and maintenance of regulated transmission services. This represents about 850 staff if training positions are included. . TransGrid also intends to keep the level of physical outsourced resources at a constant level. These targets of themselves imply an ongoing efficiency gain in the operating side of the business given the increasing responsibilities TransGrid faces over the next five years – in terms of both new assets under management and dealing with a significant increase in staff turnover due to our ageing workforce.

The Commission has rejected this position, preferring instead to establish a cumulative minimum opex reduction target of 2% per annum. This translates into a reduction in workforce of over 100 staff out of 850 (or 12%). In coming to its position TransGrid does not believe the Commission has:

- provided adequate justification for the cost reduction target;
- considered the timing and costs associated with business process re-engineering within a mature business coming off an efficient base;
- fully incorporated non-discretionary (uncontrollable) cost drivers; and
- given consideration to the potential impacts on stakeholders of the cessation by TransGrid of discretionary opex.

2.4.1 Insufficient justification for 2% cost reduction target

The Commission's draft decision imposes a cumulative 2% pa reduction in TransGrid's operating cost allowance - giving rise to a $38m reduction in operating costs over the regulatory period.

> *"The adjustment that the Commission has chosen is 2 percent real per year. Over the five years of the control, this amounts to a compound real decrease of 12.4 percent." (Draft decision page 31)*

Should, as is possible, the Commission also introduce a rolling carryover mechanism of the type used by the Victorian ESC, this will result in the same reduction in opex allowance in the next regulatory period irrespective of TransGrid's outturn this period (i.e., the 2% efficiency target reduces opex allowances in both periods by a total of $76m). These are highly material reductions and, in TransGrid's view, require detailed justification of the practicability of achieving these targets. The purpose of this section is to examine the extent to which the Commission has provided such justification.

The Commission's justification for adopting a cumulative 2% pa reduction in opex is contained in just two (2) paragraphs of the draft decision which is repeated here for the sake of completeness:

> *Like GHD, the Commission has determined an overall efficiency adjustment to represent expected productivity improvements. The adjustment that the Commission has chosen is 2 percent real per year. Over the five years of the control, this amounts to a compound real decrease of 12.4 percent. The choice of 2 percent is consistent with efficiency targets that TransGrid has adopted in the past (although it has not achieved them). It is also consistent with the Commission's efficiency adjustment in its recent Decision for Transend. It should be noted that GHD had assumed a 2 percent decrease in the opex each year, but not compounded this decrease.*
>
> *The Commission believes that the 2 percent compounded adjustment should be achievable over the period, taking account of general productivity improvements in labour and in the services procured by TransGrid. The achievement of efficiency-based opex reductions by other Australian lines businesses supports this contention.*[11] *The Commission notes that in other countries where incentive regulation has been applied over a long period, large real reductions in opex have been achieved.*[12] *Of course differences between industries and countries need to be considered when drawing comparisons.*[13]

As a matter of principle, TransGrid believes that justification for the removal of $38 to $76m[6] of value from a regulated business should extend beyond two paragraphs of a regulatory decision. TransGrid believes the draft decision to impose a 2% cost reduction on TransGrid is unjustified as it:

---

[6] Assuming a Victorian ESC style efficiency carryover mechanisms is applied to TransGrid at the beginning of the next regulatory period, otherwise $38m.

[11] *For example, data on Victorian electricity distributor operating expenditure since 1996 is valuable in this regard. Essential Services Commission. "Electricity Distribution Business comparative performance report for the Calendar year 2002" August 2003.*

[12] *For example, the National Grid Company in the UK has achieved a compound real decrease in controllable operating costs of 50% (a compound real annual reduction of 3%) from 1990 to 2003.(National Audit Office 2002. "Pipes and Wires", National Audit Office, London.) Under comparable regulatory incentives, compound annual reductions in controllable operating costs of well above 2 % have been achieved in electricity distribution in the UK. (National Audit Office op. cit. p. 36.)*

[13] *For example, it is true that in the UK the rate of demand growth is considerably lower than in some parts of Australia. But, on closer inspection, there are in fact strong similarities. For example, in the UK, while NGC has not experienced significant diversified load growth, since 1989 it has needed to invest to accommodate the connection of 25 GW of new plant (around half the peak demand) and disconnection of 22 GW. (Woolf, F. "Global Transmission Expansion: Recipes for Success. PenWell, Tulsa, USA, page 417.) This is a considerably higher rate of generation connection and disconnection than has generally been experienced by TNSPs in the NEM over the same period.*

Similar significant productivity improvements have been observed in the telecommunications, water and gas industries in the UK (National Audit Office op. cit. p. 36.) and a similar incentive regime applies to those industries as applies to TransGrid. Again, in the water industry in particular these productivity gains have been delivered when there has been an explosion of new investment.

- breaches good regulatory practice;
- the analysis performed by the Commission is insufficient to conclude a 2% pa cost reduction target is reasonable; and
- fails to give due consideration to TransGrid's relative position as an efficient Australian TNSP.

2.4.1.1 Good regulatory practice

TransGrid is advised that there are two well accepted models of good regulatory practice when it comes to setting operating (and other) cost allowances for regulated businesses. These two models fall under the categories of 'information intensive' and 'revealed cost' regulation. NERA, a well-respected international consultancy specialising in regulatory economics, advises that:

> *Under 'information intensive' regulation (sometimes referred to as 'heavy handed') the regulator ensures that they are very well informed about all the costs and challenges facing a regulated business. The regulator may gain this information through forensic examination of the actual business processes used by the regulated business or by detailed comparison of the costs of large number of comparable businesses (ie, benchmarking). Under either approach the common characteristic is that the regulator assimilates an extremely large quantity of information in order to become very well informed on the costs of running a particular business. The 'pay off' for the regulator as a result of undertaking this effort is that they can, in a well-informed manner, set operating and capital cost allowances that are below the actual revealed costs of the regulated business. That is, the regulator can use the expertise they have acquired to identify businesses that are not operating efficiently and to penalise those businesses accordingly.*
>
> *By contrast, a 'revealed cost' regulatory regime (sometimes referred to as 'light handed') does not require the regulator to assimilate the same quantity of information nor to properly understand all the costs and challenges a regulated business faces. However, the corollary of this is that the regulator relies heavily on the business's revealed costs of the last regulatory period to set the expenditure allowances for the next regulatory period. Under this model the regulator relies on the fact that the regulated business has an incentive to reduce costs during the regulatory period and that, therefore, it is reasonable to presume that revealed costs are efficient.*
>
> *Relative to an information intensive model the revealed cost model has two significant advantages: 1) it avoids the regulatory costs associated with obtaining a forensic understanding of the business/industry being regulating; and 2) avoids the potential costs associated with errors in regulatory judgement. The potential downside of relying on a revealed costs model of regulation is that the regulator can not simply jump straight to an estimate of efficient costs – it must rather wait for incentives built into the regulatory process to cause these to be revealed.*

> *Both of these models are currently applied in a large number of regulatory jurisdictions around the world. Neither has been conclusively shown to be superior to the other, however, there is a trend away from information intensive regulation (especially of the non-benchmarking style) towards revealed cost regulation. At this stage, both models can be described as consistent with good regulatory practice. However, it would be inconsistent with good regulatory practice for a regulator to depart from the use of revealed costs in setting expenditure allowances without having undertaken the efforts associated with information intensive regulation.* ***Put simply, it would be a departure from good regulatory practice to impose an expenditure allowance that was lower than revealed expenditure without having identified the type and magnitude of inefficient business practices that would justify this.*** (Emphasis added.)

By incorporating a 12.4% (by its own estimate[7]) real decrease in operating expenses, the Commission has effectively acted on the basis that TransGrid's revealed costs incorporate inefficiencies worth *at least* 12.4% of total operating costs. The only way in which such a large discretionary reduction in operating cost allowance could be justified would be if the Commission were operating an information intensive regulatory model. In fact, on the assumption that the Commission would not cut costs for a vital infrastructure provider without incorporating a large margin for 'regulatory error', TransGrid can only rationalise the draft decision on the basis that the Commission believes TransGrid is substantially more than 12.4% inefficient (presumably in excess of 20% inefficient). However, in reaching its conclusion the Commission has condensed what justification there is for this to two (2) paragraphs of its decision.

In TransGrid's opinion the draft decision is not consistent with good regulatory practice. Nonetheless, in the following section we attempt to provide a critique of what justification the Commission has provided.

2.4.1.2 Critique of Commission's analysis

The Commission's analysis reprinted above appears to provide three justifications for its choice of a 2% cost reduction target. In particular:

(i) it is the same as imposed by the Commission on Transend in their 2003 decision;

(ii) it is the same as TransGrid's previous internal targets; and

(iii) it is consistent with historical efficiency gains by Victorian electricity distribution businesses and by UK electricity transmission businesses and UK water businesses.

---

7 On page 31 of the draft decision the Commission states "The adjustment that the Commission has chosen is 2 percent real per year. Over the five years of the control, this amounts to a compound real decrease of 12.4 percent".

(i) Comparison with Transend

TransGrid believes that the comparison with Transend is unhelpful due to the very significant differences between Transend and TransGrid. In this regard it is important to note that Transend was embarking on a very significant increase in expenditure on non-augmentation capex which the Commission argued would provide operating cost benefits that justified the imposition of a 2% target reduction in operating costs. In fact, this is the only material justification provided by the Commission for assuming a 2% reduction in real operating costs.

> *"Given the high level of renewal capex and substantial increases in opex over historical levels, Transend should be able to achieve the 2 per cent efficiency dividend on its base costs without much difficulty."* (Page 61.)

While this conclusion may have been reasonable for Transend it certainly does not apply in the case of TransGrid. As discussed in section [1.2.2] above, TransGrid have proposed a very modest non-augmentation capex program and what capex we have proposed is aimed at ensuring continuing reliability not reduced operating costs. Further, TransGrid wishes to draw the Commission's attention to a comparison of TransGrid and Transend's non-augmentation capex costs. Over both the current and the future regulatory periods Transend has significantly outspent TransGrid on non-augmentation capex measured as a percentage of opex.

Table 6

	Average non-augmentation capex to opex during in past regulatory period	**Average allowed/proposed non-augmentation capex to opex during in future regulatory period**
Transend	140%	123%
TransGrid	68%	51%
Tranend/TransGrid	**206%**	**241%**

* Note that the Transend decision only distinguishes between refurbishment capex and other capex. To the extent that this does not include what TransGrid describes as 'support the business' capex then the differences in the above table will be magnified even further.

That is, Transend proposes to spend 241% more than TransGrid on non-augmentation capex over the next regulatory period (measured as a percentage of opex). Similarly, over the previous period Transend spent 206% more on non-augmentation capex than TransGrid. It therefore appears unreasonable for the Commission to apply the same assumed percentage reduction in capex over the period to both businesses. In fact, in the Transend decision, the Commission notes, "The circumstances of Transend are very different from other TNSPs".

We would also like to stress that the above table is based on TransGrid's *proposed* capex program. Due to the delay in the capex component of our decision we do not yet have a draft allowance for capex. This highlights the important fact that while the Commission has acknowledged that non-augmentation capex and opex can be substitutes for each other it is

still in the position of deciding TransGrid's opex allowance before it decides TransGrid's capex allowance.

(ii) TransGrid's internal targets

TransGrid is unsure what the Commission is referring to when it states:

> *The choice of 2 percent is consistent with efficiency targets that TransGrid has adopted in the past (although it has not achieved them).*

However, as a general point we note that it is problematic for a regulator to adopt an internal efficiency target as a *regulatory* target. That is, the regulator should not on observing that TransGrid has attempted to achieve a given cost reduction in the past require TransGrid to reduce its costs by this much in the future. There are two reasons why such an approach is problematic.

Firstly, even if TransGrid achieved the relevant cost reduction in the past there is little reason to believe that it will achieve the same cost reductions in the future. Internally driven cost reductions result from business re-engineering - where management identifies business processes that can be streamlined or altered in some way to reduce costs. The cost savings associated with these are program specific and there is little reason to believe that because there was a successfully instituted business re-engineering program in the past period, say outsourcing a particular function, that there will be a business re-engineering program that delivers identical savings in the future period.

Secondly, internal targets are set for internal purposes and should never be interpreted by a regulator as hard evidence of potential cost savings. A business can set internal cost targets for a number of reasons and may never expect these targets to be fully met. To adopt such targets as 'hard evidence' of internal inefficiencies would, in TransGrid's view, be inappropriate.

(iii) Historical Comparisons with other businesses' cost savings

The main justification in the draft decision for the adoption of a compounding 2% pa efficiency gain is that this is similar to that achieved by other regulated businesses under incentive regulation – specifically Victorian electricity distribution business and the UK electricity transmission business NGC (see the above Commission quote, particularly footnotes 11 and 12).

TransGrid is concerned that the Commission has decided to base its assumption concerning achievable operating cost reductions for TransGrid on the basis of the historical performance of businesses in other industries and other countries. This is especially concerning given that the Commission appears to have ignored the data that is available on the performance of Australian TNSPs *that are actually regulated by the Commission*. In particular, TransGrid

notes that in each of its last four decisions for Australian TNSPs the Commission has allowed a significant real increase in opex over the regulatory period.

Table 7

TNSP	**Average % increase in real opex allowed by Commission (Relative to final year of previous period)**
SPI PowerNet	52.6%
ElectraNet	32.2%
Powerlink	17.5%
Transend	4.9%

TransGrid believes that it is inappropriate that it be required, on the basis of rather vague references to NGC/Victorian DB's historical performance, to reduce operating costs by $76m when the Commission's own decisions for all other Australian TNSPs reflect a materially rising trend in real opex. TransGrid believes that if historical comparisons are to be made the Commission should at least compare transmission businesses it regulates with TransGrid before resorting to comparisons of businesses in completely different industries and countries.

When this comparison is made it is apparent that there is no hard evidence to suggest TransGrid is relatively inefficient (and should therefore have its opex allowance set below revealed costs). We discuss relative efficiency further in section 2.4.2 below.

Nonetheless, given the Commission's focus was on Victorian distribution businesses and NGC we feel it is important that some further facts are put in front of the Commission.

The first point TransGrid wishes to make is that our historical performance is as good, if not better than, many of the businesses the Commission refers to. However, this is *historical performance* and it would be unreasonable to simplistically carry this forward into the future. If a firm moves from being 25% inefficient to being perfectly efficient over a 5-year period it is clearly inappropriate to expect that firm to reduce costs by a further 25% in the next period. Once a firm is efficient it cannot reduce costs further without reducing service standards – irrespective of how fast it reduced costs in the past. Indeed, the Commission uses the Victorian DB's historical performance as a rationale for imposing a cumulative 2% reduction in real operating costs on TransGrid. *However, the regulator of the Victorian DB's (the Victorian ESC) allowed two Victorian DB's an increase in real operating expenditure in the 2000 decision.*

TransGrid's own historical performance has seen real operating costs fall 25% from 1995/96 to 2002/03. This has been achieved despite substantial increases in real wages in the

electricity industry (in excess of 10 percent)[8] and increases in TransGrid's output over that period. Ignoring any changes to TransGrid's output, our operating expenditure would be in the vicinity of 35 percent (10 plus 25) higher today had we not achieved any efficiency since 1996.

In reality, the output TransGrid actually delivers to consumers with this lower operating expenditure has significantly increased over the last eight years - with over 20 percent more GWhs transmitted. Moreover, TransGrid has also taken on considerably more responsibilities in the NEM since 1996 as outlined previously.

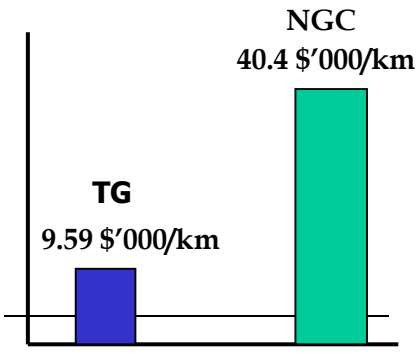
Given this history, a very strong case can be made that TransGrid has already picked the 'low hanging fruit' with regard to opex efficiencies (and much of the high hanging fruit too). While TransGrid will continue to attempt to constrain and, where possible, reduce costs we cannot be expected to repeat that historical experience. Nonetheless, this is more or less what the Commission requires TransGrid to do over the next five years to meet its 2008/09 opex allowance.

TransGrid is unaware of any other regulator (domestically or internationally) that sets efficiency targets on the basis of the historical performance of its own regulated businesses – let alone on the historical performance of regulated businesses in other industries/countries.

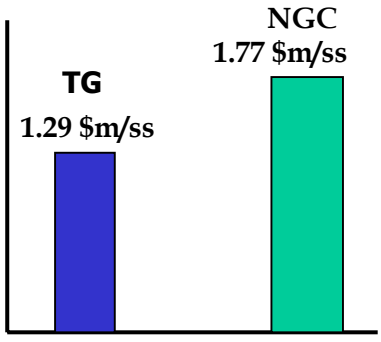
Secondly, what evidence does exist suggests that TransGrid is already relatively more efficient than NGC. This suggests that, if anything, TransGrid has fewer remaining potential efficiencies than NGC. As shown in the below diagrams, using the Commission's own partial benchmarking indicators, TransGrid has considerably lower opex per substation and per length of transmission line.[9]

Figure 2

Operating Costs / Km of line



Operating Costs / Substation



8 ABS Wage Cost Index - Electricity, gas and water supply.

9 Source, NGC Opex figures *from Review of Operating Cost Efficiency for the 2002 and 2006 Price Control* 31 July 2000. NGC substations and length of line National Audit Office 2002. *Pipes and Wires,* National Audit Office, London.). TransGrid opex per substation/line from Commission draft decision. 2000 Opex per km of line length (route) for TransGrid is 9.59 $'000/km versus 40.4 $'000/km for NGC. 2000 Opex per substation is 1.29 $m/ss for TransGrid and 1.77 $m/ss for NGC.

Moreover, National Grid's revenue from Transmission Operations in the UK is eight times TransGrid's revenue for delivering only four times as much electricity, indicating they are notionally twice as expensive as TransGrid. While this is not conclusive, it does demonstrate how notoriously difficult international comparisons are to make and why the Commission should be cautious about relying on these.

To summarise, the Commission's three stated justifications for imposing a 2% pa *efficiency* target fail to provide a reliable guide to TransGrid's potential cost reductions in the forthcoming regulatory period.

2.4.2 TransGrid is a relatively efficient Australian TNSP

The Commission has recognised that benchmarking of transmission businesses is fraught with difficulties, both in the recent discussion paper on the draft regulatory principles and at recent related forums. It is therefore of some concern that comparisons between TransGrid and other organisations figure prominently in the Commission's justification of TransGrid's operating expenditure targets.

To draw meaningful conclusions from comparative data about whether TransGrid is currently relatively efficient requires careful adjustment for differences between TransGrid and other organisations.

For example, data on opex cost per substation and opex cost per km of line needs to be adjusted for terrain differences, environmental requirements, place in the market, size of substation, etc. Data on cost per $RAB need to consider whether the RAB for each TNSP has been valued (and depreciated) on a similar basis. TransGrid has a higher cost environment because of the high proportion of National Parks, Nature Reserves and other conservation areas that its lines traverse. There are over 60 National Parks that are impacted by TransGrid assets and this leads to significant costs in the preparation of detailed environmental plans for any maintenance activity and the higher cost that attaches to maintenance works carried out within strict environmental constraints.

Another major factor to consider is the different geographic areas covered by the different state networks. Victoria is obviously much smaller and a critical mass of people could be much more cost effectively supplied over a concentrated area.

TransGrid also has a higher proportion of assets at 330kV and above than other Australian utilities. Of TransGrid's 81 substations, 38 operate at 330kV and above, while 6,228 km of its 12,400 km of transmission lines operate at these voltages.

Benchmarking figures based on number of substations do not always provide an accurate comparison of the size of networks. One measure that has been used to provide normalization is the number of circuit ends. Such a measure shows that the circuit ends per

substation for TransGrid (8.3 circuit ends per substation), SPI PowerNet (8.9) and Powerlink (8) are similar whilst those for Transend (5.5) and ElectraNet SA indicate a smaller network size.

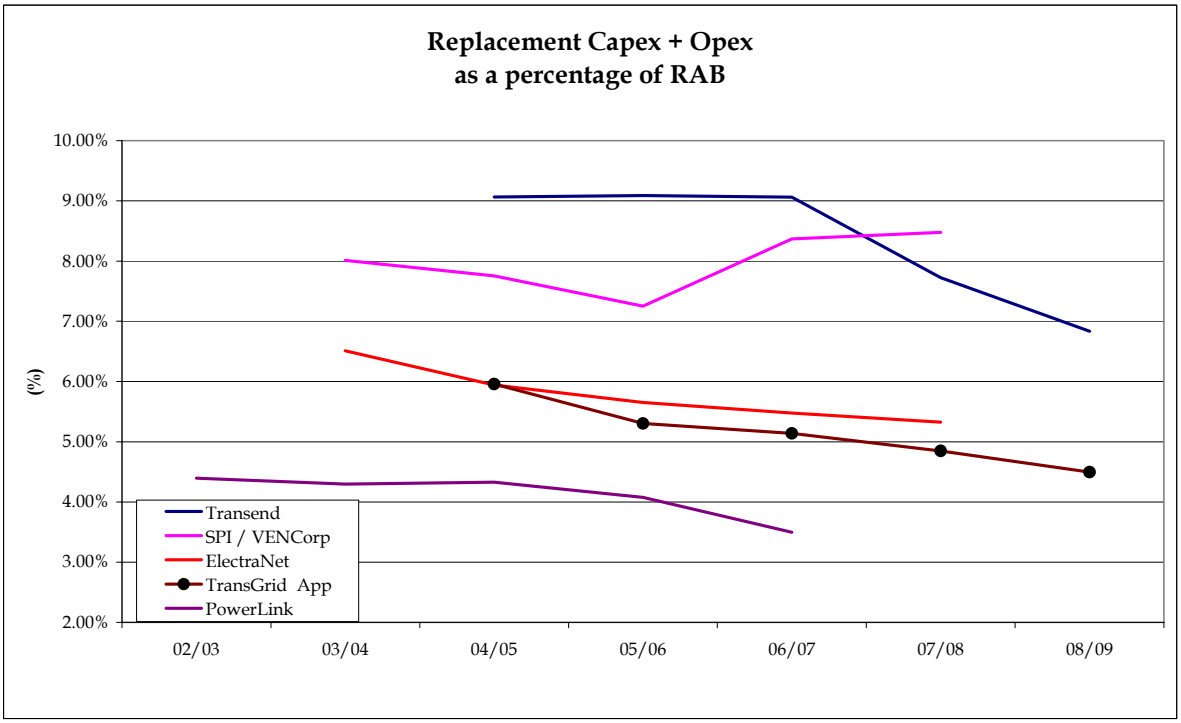
Even abstracting from these issues, the Commission benchmarking data needs to be adjusted for material errors in calculations and to account for opex/capex substitution. When these factors are taken into account TransGrid appears relatively very efficient. Nonthe-less the Commission's draft decision imposes the only real reduction in opex on any Australian TNSP; and

TransGrid notes that the Commission has recognised the fact that there can be material substitution in opex and non-augmentation capex. In particular, the Commission's draft decision uses this potential trade-off as a rationale for not providing TransGrid with any compensation for additional costs incurred in maintaining new assets.

> *In view of this, the Commission considers that it is reasonable to suggest that any increase in operating and maintenance costs that may arise because TransGrid has a longer length of line or cable to maintain, will be more than offset by decreases in opex attributable to the above factors [*specifically non-augmentation capex. (Page 30.)

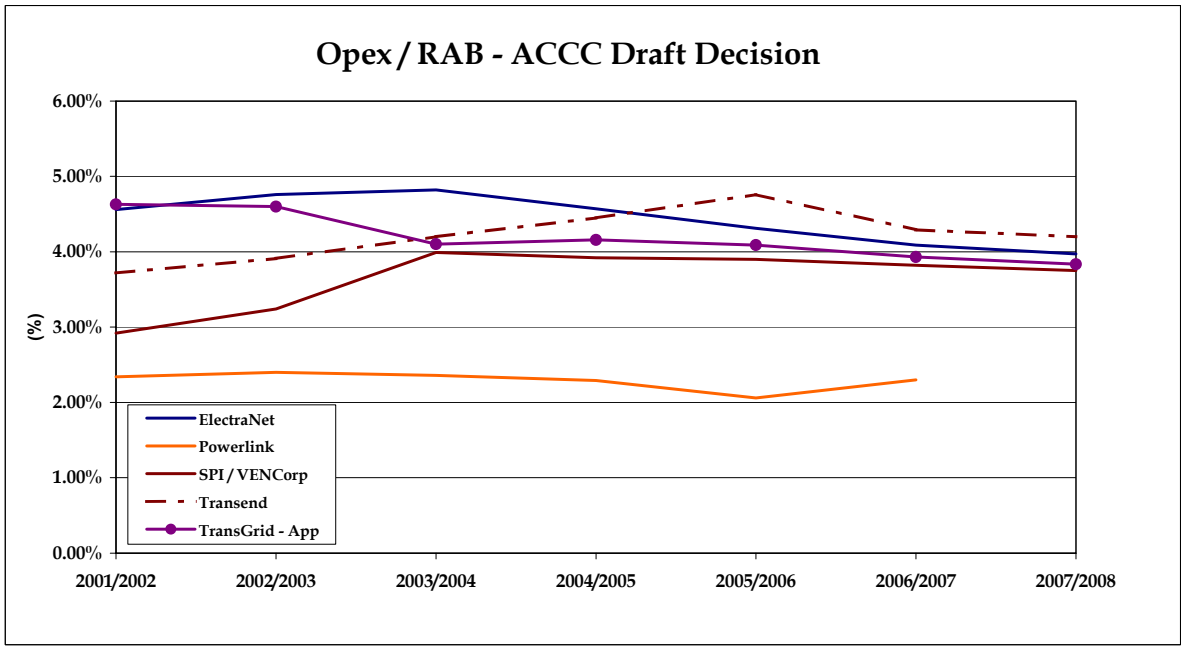
The Commission has made the same observation concerning the substitutability between opex and capex in its Transend decision (as discussed above). However, the Commission's benchmarking of Australian TNSPs does not include any adjustment for the level of non-augmentation capex. As already described, TransGrid has one of the lowest levels of non-augmentation capex in the NEM. When non-augmentation capex is combined with opex in the Commission's benchmarking analysis TransGrid is clearly one of the most efficient TNSP.

This can be seen in the below graphic which was supplied to GHD but did not appear in their report to the Commission. It is our desire that the Commission now give due consideration to this information.



Note all estimates of non-augmentation capex are taken from the relevant Commission's decision or expert reports.

This compares with the same version of the comparison without non-augmentation capex included as per the Commission's draft determination.



Thus, in the Commission's own benchmarking, TransGrid appears to be in the 'middle of the pack' while when non-augmentation capex is included TransGrid is clearly 'below the pack'.

TransGrid believes that the draft decision's treatment of substitutability between opex and capex is effectively 'having it both ways'. On the one hand, the Commission relies on the fact that non-augmentation capex can be substituted for opex in order to disallow providing additional expenditure for TransGrid's new assets. (Note: TransGrid has provided additional evidence above that this is not the case for TransGrid's proposed capex program). On the other hand, the Commission 'tests' the reasonableness of a compounding 2% pa opex efficiency target by benchmarking but excludes non-augmentation capex from that benchmarking. If the Commission included non-augmentation capex in its benchmarking it would see that TransGrid would appear substantially more efficient relative to all its peers. If the Commission included non-augmentation capex in its benchmarking then it would be much less confident of its conclusion that TransGrid could achieve a cumulative 2% pa reduction in opex without sacrificing service standards.

TransGrid has not been able to reproduce the Commission's other benchmarking ratio analysis, however, it appears to contain several significant errors that do not favour TransGrid. Three of the most significant errors in the Commission's analysis are:

- the failure to update the ratio analysis to a common base year to determine real opex;
- the failure to account for growth by TNSPs; and
- the inclusion of debt raising costs into TransGrid's benchmark opex.

Not setting a common base year favours those TNSPs whose real opex is denominated in earlier years, as they take no account of effects of inflation in subsequent years.[10] That is, TransGrid's "real" opex will be greater than other TNSPs "real" opex by the simple fact that there has been inflation in the intervening years.

Furthermore, the Commission has not properly accounted for growth in TransGrid's transmission network. As a number of the ratios depend on the size of the transmission network, any growth will improve the benchmark ratio. This is important consideration as TransGrid's network is expect to expand significantly in the forthcoming period. For example, TransGrid is expecting to commission eight new substations, which lowers the opex/substation ratio in 2008/09 to 1,248.31 a decrease of 8.95%.

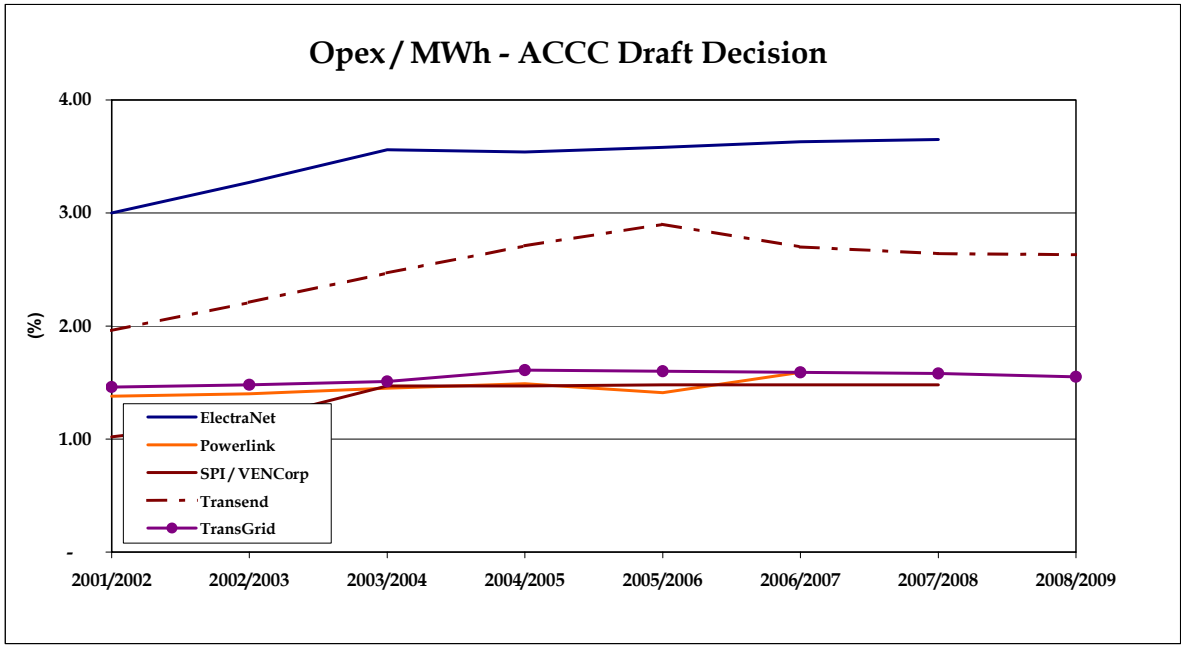
In addition, the Commission decision to include debt raising costs in TransGrid's real opex costs inflates its benchmark ratios compared to other TNSPs. Other TNSPs such as SPI

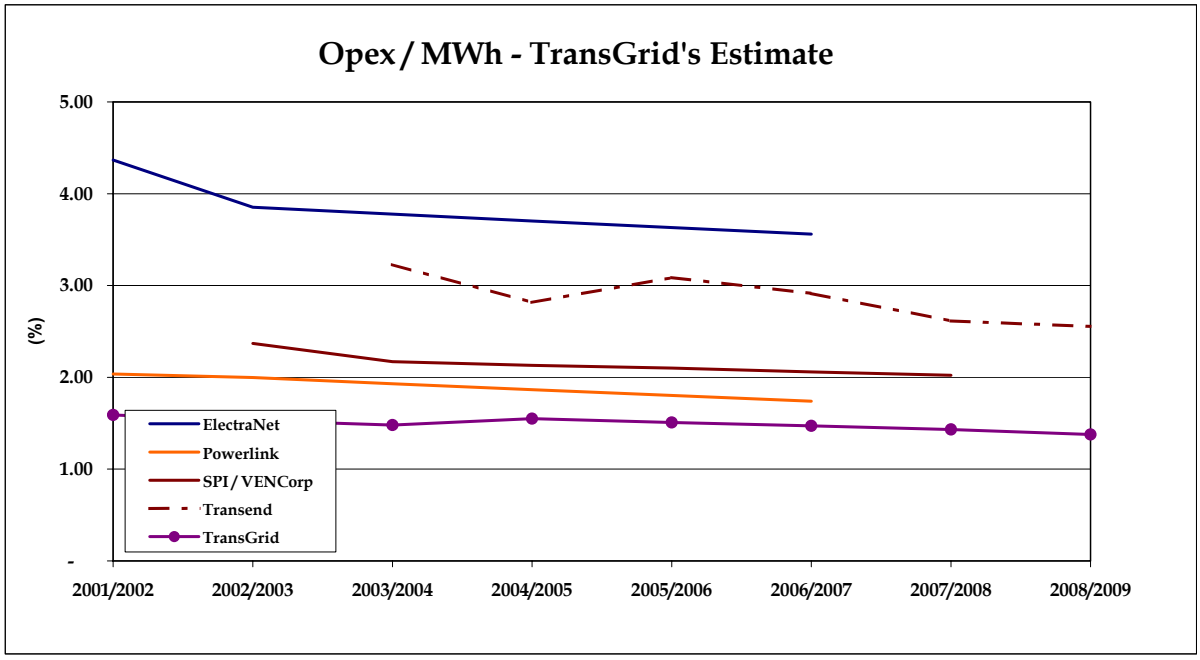
[10] It appears that the Commission's Draft determination has not updated the real opex numbers to common base year, as none of ElectraNet's benchmark ratios have changed from ElectraNet's final decision in December 2002.

PowerNet and ElectraNet, received an allowance for debt raising costs in their debt margins rather than as an opex item. For the purposes of benchmarking TNSPs opex costs, the Commission should at a minimum remove debt raising costs to ensure that comparisons are based on common cost categories.

These identified errors will overstate TransGrid's relative opex costs when benchmarked against other TNSPs.

The problems in the analysis are illustrated in the below comparison of opex per MWh. The first graphic shows the comparison made in the Commission's draft decision. The second graphic shows TransGrid's estimate of the actual opex per MWh after correcting for the errors identified above.





Note: Estimated using real decision opex, set to a common base year (real $2002/03).
Gird Support has been removed from ElectraNet's, Transend's and Powerlink's opex figures.
MWh taken from most recent annual reports and grown by 2%.

Clearly, the figures used in the Commission's draft decision disguise the fact that the draft decision would result in TransGrid having the lowest capex per MWh of all TNSPs. On the basis of this analysis TransGrid believes that comparisons between TransGrid and other TNSPs tend to show TransGrid as having relatively low opex. This finding becomes even stronger if non-augmentation capex was included in the above graphic.

To the extent that comparisons across businesses can/should be made then these comparisons are most relevant. In this regard there does not appear to a justification for the Commission concluding that TransGrid is inefficient and therefore justifying a departure from TransGrid's revealed costs.

2.4.3 Incorporating the costs and timing impacts of business process re-engineering

The Commission is proposing in the draft decision that TransGrid achieve operating cost efficiency gains that exceed the targets previously considered appropriate by TransGrid. To achieve the Commission's targets TransGrid will need to revisit its own targets in a systematic and informed fashion based on a comprehensive assessment of service obligations and business processes. It would be irresponsible of TransGrid to implement an operating cost reduction program on any other basis given the need to ensure delivery of an essential service and meet safety and environmental obligations.

It is also good practice to ensure that the efficiency gains are sustainable. That is the cost reductions must not be at the expense of reduced services and/or the future effective operation of the business.

As already noted, TransGrid is coming off an efficient base where material cost reductions have already been achieved suggesting that the 'easy gains' may have already been realised.

Under these circumstances a full business process re-engineering review needs to be undertaken. The scope of such a review would extend beyond identifying the scope for additional efficiency gains into developing and assessing business improvement options, proposing strategies and contributing to the development of relevant business cases and execution plans. Done properly this would involve a major internal and external resource commitment, as well as taking time to complete. On this basis genuine efficiency reduction opportunities would not be fully assessed until at least the end of 2004/05, that is just before the second year of the next regulatory period. In addition, there would be material additional operating costs associated with the conduct of the review.

Secondly, there would be material implementation costs associated with such a process.

In a business such as TransGrid, where operating costs are dominated by labour costs, staff reductions of more than 12% of the workforce, or more than 100 people, would be expected to be involved, just to meet the Commission's targets. To achieve this quickly, and in a targeted fashion, severance payments would be significant in the first year of implementation. Accordingly, net gains in the operating expenditure would be unlikely to commence until 2006/07, the third year of the reset period.

However, because the Commission has implicitly assumed that efficiency gains are made without cost and can be immediately implemented TransGrid will have its opex allowance cut from the very first day of the next regulatory period. This is, we believe, an unreasonable assumption for the Commission to make. We note that Ofgem when it conducted a forensic examination of NGC's future controllable costs explicitly identified each redundancy and then factored in the additional associated cost of between 2 to 2.5 years of salary costs.[11]

Finally, as the Commission has noted in the draft decision, increased levels of replacement capital expenditure and information system capital expenditure, can be an important component of achieving reduced operating costs, as well as overall business efficiency improvement. The Commission has concluded that the current and proposed levels of this expenditure in these areas offset the additional costs associated with servicing an expanded asset base. TransGrid has shown (elsewhere in this submission) that this level of expenditure is actually insufficient to achieve this offset. In any event, based on either TransGrid's analysis or the Commission's position, the use of this kind of expenditure to achieve the Commission's operating cost reduction targets requires an increase in future capex provisions over and above the levels currently in the TransGrid revenue application.

---

[11] Ofgem, Review of NGC's operating cost efficiency for the 2002 to 2006 price control, 31 July 2000, paragraph. 6.22.

Clearly, a position cannot be reached on this aspect of opex reductions until after the Commission's review of TransGrid's future capex needs is completed.

In summary, the efficiency targets set by the Commission need to be adjusted to take account of the need for and cost of a comprehensive business process re-engineering review and execution strategies arising from that review.

2.4.4 Economy Wide Labour Productivity Improvements

In the absence of any evidence that TransGrid is currently operating inefficiently, the only reasonable justification for imposing an 'efficiency' target on TransGrid is that TransGrid's efficient costs will fall due to 'natural' labour productivity improvements - in line with labour productivity improvements in the general economy.

TransGrid does not ascribe to this view but notes that in order to implement such a target there are effectively two options:

1) Forecast labour productivity growth in the general economy; or

2) Simply index labour costs to CPI

Option 1) is extremely difficult to do properly. The Australian Bureau of Statistics releases measures of labour productivity in the economy, however, these estimates tend to be biased upwards relative to true labour productivity because they treat all increases in output per hour worked as due to improved labour productivity when, in reality, much of that output will have grown due to capital deepening in the economy, technological improvements and increasing returns to scale in many industries.

For example, the ABS estimates that labour productivity in the Electricity, Gas and Water industries has grown at 7.2% pa over the ten years to 2000.[12] In order for this to be true reflection of labour productivity improvements the workforce in that sector would have to have halved in a ten-year period. Notwithstanding the dramatic historical improvements in labour productivity by firms such as TransGrid during that period, this is clearly an unrealistic outcome and much of the improvement in 'labour productivity' in that period relates to growth in output (eg, MWh) which, due to economies of scale, can be supplied without proportional increases in labour inputs. Further, even if historical labour productivity could be measured accurately, it would remain true that historical labour productivity outcomes need not reflect future labour productivity outcomes.

12 Year Book Australia 20021301.0 - 2002

The second alternative provides, in TransGrid's view, a better way of imposing an assumed improvement in labour productivity. Indexation of labour related costs to CPI means that TransGrid must find productivity improvements equal to the increase in its real wages bill. This has some appeal on the basis that it is a proxy for the average growth in labour productivity in the economy – albeit an upward biased proxy. (This also has some appeal in that TransGrid only really has control over its own labour costs.)

The reason such an approach provides an upward bias of general labour productivity improvements can be explained as follows. If the only input into production in the Australian economy was labour and if there were constant economies of scale then, by definition, any increase in output per unit of labour (ie, real wages)[13] would be due to improved labour productivity. Under this scenario, the difference between wages growth and CPI growth is fully explained by increasing labour productivity.

However, the real economy is more complicated than this and there are other factors that will tend to cause real wages to rise faster than CPI. In particular, economies of scale in the Australian economy (such as exist in most infrastructure industries) will tend to allow unit prices to fall without a reduction in units of labour used. For example, TransGrid (and all other businesses with economies of scale) may maintain the same number of employees but if throughput increases (MWhs, GJ, etc) then prices will tend to fall, which will tend to cause CPI to fall. Similarly, technological change will tend to reduce prices in the general economy such as for computers and cars (even if it doesn't reduce the operating costs for mature industries such as electricity transmission).

For these reasons it is likely that simply indexing TransGrid's labour costs to CPI will require TransGrid to achieve greater than average labour productivity improvements than in the general economy. Further, such an approach does not allow TransGrid to share in the benefits of such productivity improvements. For both of these reasons TransGrid does not recommend the adoption of this approach.

[13] Under this scenario there is only one factor of production so output per unit of labour is equal to real wages.

2.5 Sharing of Efficiency Gains

TransGrid believes that the Commission has not fully explained how its draft decision is intended to deliver a fair sharing of efficiency gains between customers and TransGrid. Clause 6.2.2 of the Code requires, as a core objective, that the Commission must seek to achieve

> "*an equitable allocation between Transmission Network Users and Transmission Network Owners and/or Transmission Network Service Providers of efficiency gains reasonably expected to be achievable*".

TransGrid's own analysis suggests that it will be essentially impossible for TransGrid to achieve anything approaching *an equitable allocation* of efficiency gains under the Commission's draft decision.

This reflects the fact that the Commission's operating cost allowance has significant forecast efficiencies already built into it. Specifically, the Commission opex allowance incorporates:

1. an implicit efficiency gain by assuming nominal wages costs are growing slower than the NSW industry average;

2. an implicit efficiency gain by making no allowance for the cost of new assets in the next regulatory period;

3. an implicit (and retrospective) efficiency gain by only rolling forward 2002/03 costs to 2003/04 using CPI rather than TransGrid's actual unit cost increases (most importantly labour costs at 5% pa);

4. an implicit (and retrospective) efficiency gain by, presumably accidentally, removing $1.55m from 2002/03 insurance premium costs;

5. a further implicit prospective efficiency gain by, presumably accidentally, assuming that underlying costs only grow by inflation between 2007/08 and 2008/09; and

6. an explicit prospective efficiency gain on TransGrid by assuming a 2% pa compounding efficiency gain for the next regulatory period.

The relative impact on the opex allowance relative to a scenario where no efficiencies are built into the future opex allowance can be seen in the below table 8.

Table 8: Comparison of Underlying Costs with Commission draft decision

	03/04	04/05	05/06	06/07	07/08	08/09
Underlying cost growth	118.4	123.4	125.9	128.7	132.2	135.2
less - use of WCI of 4.1% instead of 5%	117.6	121.8	123.5	125.4	127.9	130.0
less – no allowance for new assets	117.6	121.0	122.6	124.3	126.0	127.8
less – using roll forward to 2003/04[14]	116.0	119.3	120.9	122.5	124.3	126.0
less - $1.55m in 2002/03 insurance costs	114.4	117.7	119.3	120.9	122.6	124.3
less – correcting the roll forward to 2008/09	114.4	117.7	119.3	120.9	122.6	122.7
Commission draft decision with 2% efficiency gain	114.4	$115.4	$114.6	$113.9	$113.3	$111.1

This table shows that if TransGrid achieved no efficiencies from 2004/05 onwards then its real costs in 2008/09 would be around $135.2m[15] (including debt raising costs). However, the draft decision only allows real costs of $111.1m. The difference between these amounts is explained by the fact that the draft decision incorporates both implicit and explicit efficiency gains in its opex allowance. Importantly, the implicit efficiency targets account for more of the difference ($12.5m) than the explicit 2% pa efficiency target ($11.6m).

TransGrid has asked NERA to advise on the sharing of efficiency gains implicit in the Commission's draft decision. NERA has advised that, rather than sharing in any efficiency achieved, TransGrid will have to achieve compounding efficiencies well in excess of 2% pa in order to avoid a financial penalty. NERA's advice is summarised in the following table 9.

[14] Note, our modelling updates the Commission CPI figure for 2003/04 from 2.26% to 1.98% to reflect that CPI for the March to March period is now available. For this illustration we will in the remainder of this table (from this point down) we will use 2.26% from the Commission draft determination. The effect is to understate the efficiency already built into the Commission's opex allowance.

[15] A potential issue that was identified at the time of finalising this submission is the way in which debt raising costs have been treated. It appears that TransGrid's opex targets for the previous regulatory reset period were set exclusive of debt raising costs. This implies that TransGrid's opex target for the previous reset period needs to be adjusted upwards to properly determine the efficient opex starting point for the 2004/05 to 2008/09 reset period. This matter will be taken up separately with the Commission during July 04.

Table 9

Efficiency is measured in terms of cost reductions relative to:	Penalty associated with achieving 2% pa efficiency ($m)	Efficiency Gain required to avoid penalty	Efficiency Gain required to achieve 33% share of total benefits
A) the Commission starting point (corrected for insurance and wages growth from 2002/03) and TransGrid's estimate of underlying cost increases.	-$46m (-33% sharing ratio)	3.9%	Impossible
B) the Commission starting point (corrected for insurance and wages growth) and the Commission's estimate of underlying cost increases.	-$19m (-19% sharing ratio)	2.8%	100%
C) the Commission starting point (corrected for insurance but **not** for wages growth) and the Commission's estimate of underlying cost increases.	-$12m (-9% sharing ratio)	2.5%	27%

Each row (scenario) in the above table defines efficiency as a cost reduction relative to a different benchmark of 'zero efficiency costs' over the regulatory period. The different scenarios are explained more fully below:

- under scenario A) implicit and explicit efficiency gains 1 through 6 above are removed from the Commission's opex allowance to give the 'zero efficiency' benchmark;

- under scenario B) implicit and explicit efficiency gains 2 through 6 above are removed from the Commission's opex allowance to give the 'zero efficiency' benchmark;

- under scenario C) implicit and explicit efficiency gains 4 through 6 above are removed from the Commission's opex allowance to give the 'zero efficiency' benchmark. (That is, scenario C adopts the 'zero efficiency' benchmark the Commission would estimate if it did not make the apparent mistakes detailed in 4 and 5 above).

The first row of the above table tells us that even if TransGrid delivers a 2% pa compounding reduction in operating costs relative to benchmark costs in scenario A, it will still face a penalty of $46m. The NPV (in perpetuity) of the cost reductions associated with a 2% pa cost reduction during the regulatory period (and assuming these cost reductions are permanent) is around $139m. This means that, as a result of achieving an efficiency gain of 2% pa (worth $139m) TransGrid is *penalised* an amount worth $46m.

The reason that TransGrid receives a penalty rather than a reward is that the Commission's opex allowance incorporates more than its explicit 2% pa explicit efficiency target. This

means that TransGrid must achieve a more than 2% pa compounding cost reduction in order to match the Commission's opex allowance. In fact, TransGrid must achieve a 3.9% pa compounding reduction in costs over the regulatory period in order to avoid a penalty (as set out in the third column, second row of the above table).

It is also instructive to ask what level of cost reduction TransGrid must achieve in order to receive a 'fair' share of those cost reductions. TransGrid considers that a 'fair' sharing of efficiencies involves the regulated business and its customers both receiving 50% of the value created. However, TransGrid is aware that the Victorian ESC has concluded that a 33%/67% sharing ratio between business and customers satisfies the Code's requirements for an equitable allocation. In this regard, it is relevant to ask what level of cost reduction TransGrid would have to achieve in order to receive a 33% share of the value of that cost reduction? The answer to this question is that under scenario 1) this is impossible. That is, even if TransGrid reduced operating costs to zero in 2004/05 and kept them at zero forever it would still receive less than 33% of the benefits created by this cost reduction.

Under scenario 2) the only way in which TransGrid can achieve a 33% sharing ratio is if it does reduce operating costs from 2004/05 onwards. While conceptually possible this is impossible in any real sense. In fact, even under scenario 3), TransGrid would have to achieve a 27% pa compounding reduction in costs each year relative to the benchmark in order to receive 33% of the benefits created (ie, by 2008/09 TransGrid would have to have costs that are 20% $((1-0.27)^5)$ of the benchmark level of costs for 2008/09. That is, even if we dismiss all TransGrid's arguments as to why its cost drivers are higher than the Commission assumes, TransGrid must still achieve a 27% pa compounding cost reduction to receive a 33% percent share of benefits created. TransGrid regards this outcome as impossible in any practical sense.

On the basis of the above TransGrid feels strongly that it is impossible to achieve a fair sharing of any efficiencies created given the Commission's draft decision.

TransGrid also feels strongly that a fair sharing of efficiency gains does not imply that TransGrid should be penalised if it does not achieve an arbitrarily high implicit efficiency target imposed by the Commission. TransGrid believes that, as a matter of principle, a fair sharing of efficiency gains requires that TransGrid receive a positive allocation of any efficiency gains. This requires that forecast costs do not include any implicit efficiency targets.

2.5.1 Controllable versus uncontrollable costs

TransGrid notes that the implicit and explicit efficiencies incorporated into the draft decision opex allowance represent around 4% pa compounding. Meeting this target requires a 4% pa compounding reduction in all costs – controllable and uncontrollable. Uncontrollable costs (such as taxes, council rates, debt raising costs, insurance premiums etc) represent around 20% of TransGrid's costs. In order to achieve a 4% pa reduction in total costs TransGrid

must achieve a 5% pa reduction in controllable costs. In effect, this means that TransGrid must shrink its controllable activities by 23% over the regulatory period.

An examination of debt raising costs may serve to highlight TransGrid's concerns in this regard. The draft determination makes an allowance for debt raising costs of around $2m pa based on the Commission's assessment of efficient debt raising costs. However, the assumed 2% efficiency target is immediately applied to this amount – reducing it by around 10% over the regulatory period. This appears incongruous, as either the Commission over-estimated efficient debt rising costs or the draft decision is allowing lower than efficient recovery of debt raising costs.

TransGrid considers that if any efficiency target is to be included in the Commission's opex allowance this target should be made explicit and should only apply to controllable costs. TransGrid is happy to work with the Commission to define controllable costs in a satisfactory manner.

2.6 TransGrid's Proposal

TransGrid believes that the Commission should adopt 2003/04 actual operating expenditure level as the appropriate starting point for its calculations when audited values become available, and with appropriate adjustments for temporal factors[16]. However, should the Commission wish to retain its approach of starting with 2002/03 actuals, TransGrid proposes the following adjustments to the Commission's draft determination:

- Labour related cost increases should be forecast at 5.0% p.a., in line with relevant actual labour market conditions not 4.1% p.a.;
- The costs to TransGrid of maintaining new assets should be included in the projections;
- The $1.55m insurance premiums, incorrectly removed from 2002/03, should be reinstated;
- Cost changes in the two years 2002/03 to 2003/04 and 2007/08 to 2008/09 should be modelled on the basis of indices accepted by the Commission as appropriate for other years rather than CPI; and
- The Commission's explicit 2% efficiency target needs to compensate for other implicit efficiencies, to reflect a more complete assessment of the true scope for efficiency gains, to accommodate the consequential costs associated with implementing these targets, and to enable TransGrid to share equitably (as required by the Code) in both explicit and implicit efficiency gains. s.

The table 10 below sets out the effect of these proposed changes on TransGrid's allowable operating and maintenance expenditure over the next regulatory period.

Table 10

	03/04	04/05	05/06	06/07	07/08	08/09
TransGrid's estimated operating expenditure (real 2003/04 $m)	118.4	123.4	125.9	128.7	132.2	135.2
Commission Draft Decision (real 2003/04 $m)	114.4	115.4	114.6	113.9	113.3	111.1

[16] As noted earlier in this some adjustment may be required to account for labour that was transferred temporarily to the MetroGrid project to minimise delays in commissioning this vital project. This results in this labour being treated as capex in accordance with accounting standards. Consequential 'catch up' in deferred maintenance activities will be necessary in 2004/05 as a result.

Note that, for the purpose of comparison TransGrid has not include the costs of self-insuring Towers and Wires risk in the above table 10 (as this was not included in the Commission's draft decision on the basis that the TransGrid Board had not formally adopted this policy). However, in the final decision the Commission should include an amount of $0.755m in 2003/04 dollars to reflect this amount.

- Before adopting an explicit efficiency target, the Commission needs to undertake significantly more analysis (and explanation) of where TransGrid can achieve these efficiencies. However, if the Commission is to impose such a target it should:

    - only be applied to controllable costs (eg, not to costs driven by external factors such as insurance and taxes nor to costs the Commission has separately determined as efficient – eg debt raising costs and self-insurance of Tower's and Wires risks);

    - should be set at a level to allow a fair sharing of the benefits between TransGrid and customers; and

    - should not exceed the average efficiency levels in the Australian economy. In effect this would require that the Commission's only efficiency adjustment to be to escalate wages by CPI rather than nominal wage growth. To be clear, this means that the Commission would remove the 2% efficiency target altogether in favour of indexing labour related input costs at CPI rather than nominal wage growth. This, of itself, imposes an economy wide average level efficiency improvement target on TransGrid's operating costs. This is not the approach preferred by TransGrid. Further adjustments are also be needed to address the previous points on adjustments to controllable costs and equitable sharing of efficiency gains.

Attachment 2A – Insurance Costs

TransGrid's insurance costs related to the draft decision fall into three categories, namely, Insurance Premiums, Self-Insurance and Insurance Deductibles. Each of these categories reflects a clearly definable cost to TransGrid which must be met. Only insurance premiums are included in the 2002/03 audited accounts provided to the Commission.

Insurance Premiums

Over recent years, insurance premiums have increased significantly due to the impact of major events such as the World Trade Centre and a number of natural disasters. This has been exacerbated by the poor performance of the Financial Investment sector.

As part of the review by the Commission and its consultants, TransGrid provided detailed information in regard to its insurance costs. However, in the draft determination the Commission significantly reduced the allowance for insurance costs met by TransGrid.

In 2002/03, TransGrid's external insurance costs were $5,018,106.97, and comprise the following insurance types:

- Property (incl Fire Service Levy)
- FM Global Engineering Fee
- Liability
- Motor Vehicle (incl Fire Service Levy)
- Excess of Loss Workers' Compensation
- Workers Compensation-Other than NSW
- Personal Accident
- Fidelity
- Corporate Travel
- Marine Transit
- Directors' & Officers' Liability

Insurance premiums are a necessary part of an organisation's risk management strategy and it is difficult to understand why such costs would be reduced by the regulator. TransGrid has targeted insurance in an effort to minimize its operating costs but premiums will continue to rise due both to the influences of the world-wide insurance market and the impact of TransGrid's growing asset base.

Premiums will continue to increase at a rate faster than inflation. The Commission in its calculations have only allowed an increase marginally above the projected inflation rate and then applied an efficiency factor. Achieving such a target cannot be accomplished without placing TransGrid at significant financial risk.

Self-Insurance

As part of normal business operations, TransGrid is confronted with a wide variety of risks. TransGrid has always analysed its risks in detail each year as part of its Insurance Renewal process and determined which risks should be insured externally and which risks it is more appropriate to self-insure.

There remain specific risk exposures which TransGrid has determined that it considers it can better manage internally or where the cost of insuring such risks is prohibitive.

TransGrid has one major risk category not covered by External Insurance. Transmission lines and towers risks are managed internally as the cost of external insurance premiums are prohibitive.

The Commission in its draft decision acknowledged the prudency of the self-insurance of TransGrid's Towers and Wires risk subject to a Board Resolution expressed in terms defined by the Commission.

At TransGrid's Board Meeting held on the 21st June 2004, the following resolution was passed.

"The Board notes the report of the General Manager/Commercial and resolves that:

1. *TransGrid self-insure in respect of the "Towers and Wires risk" identified in Attachment One. In making this resolution, TransGrid acknowledges that, in respect of Towers and Wires risk, if this risk were to eventuate in the regulatory period covered by the Commission's revenue cap, it will not be able to seek:*

    a. *a pass-through under the pass-through rules adopted as part of the revenue cap for any loss or expenditure resulting from the event; and*

b. *to "carry forward" any loss or expenditure resulting from the event and recover them in future regulatory periods; and*

2. *TransGrid seek a pass-through from the Commission for other events not covered by insurance policies, that is the:*

   a. *cost of an event below the insurance policy threshold;*

   b. *value of the deductible where a claim is made against an insurance policy; or*

   c. *cost of any event in excess of the value of an insurance policy coverage."*

On the basis of this resolution, TransGrid seeks the addition of $755,000 to its allowed Operating Expenditure figure as set out on page 32 of the draft determination.

Insurance deductibles

Most insurance policies contain a requirement for insured parties to meet the initial component of any claim, know as the deductible amount. As part of the insurance renewal process, TransGrid assesses proposed premiums and the associated deductible figure to obtain the best balance between the insurable risk and the insurance premium.

The Commission in its draft determination recognises the insurance deductible as a cost which must be met in the event of an insurance claim and has provided for this to be included as part of the "pass-through" mechanism. TransGrid supports this outcome.

However, TransGrid is seeking a more detailed determination from the Commission which fully defines the treatment of Insurance Deductibles and in particular, insurance event costs which are kept below the deductible i.e an insurance event which costs $250,000 to repair where the deductible is $300,000.

Circumstances also arise where an insurance event is marginally in excess of the deductible but for commercial reasons (usually to minimise future insurance premiums) a claim on an insurer is not made. In such a circumstance, it is considered the deductible should be treated as a pass-through".