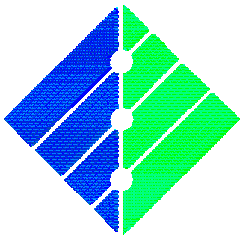

TransGrid

NSW and ACT Transmission
TransGrid Network Revenue Cap
Forward Capital Expenditure
2004/05 – 2008/09

Formal Response to ACCC
Supplementary Draft Decision

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24 March 2005

EXECUTIVE SUMMARY

This submission is TransGrid's response to the Commission's Supplementary Draft Decision regarding TransGrid's Capital Expenditure program for the 5-year period to 2008/09.

Before detailing various issues with the Commission's Supplementary Draft Decision (SDD), TransGrid wishes to refer to the public forum in respect of both Energy Australia's and TransGrid's forward capex programs conducted by the Commission on Friday 18th March 2005. Among many issues raised at the forum, we wish to highlight three strongly recurring themes that should be viewed by the Commission as very significant, given that they were *contained in the presentations of a range of stakeholders including generators, end users and independent industry observers as well as the two transmission companies*. These were:

- The SDD represents a "micro-managing", intrusive approach to regulation by the Commission rather than an incentive-based, light handed approach. The SDD effectively delves in detail into areas of transmission planning which is the responsibility of the transmission companies, and for which they are responsible and held statutorily accountable;
- TransGrid's final average price appears to have been the underlying objective of the whole review by the Commission, without placing it in the context of overall electricity pricing (approximately only a little more than 5% of the total cost to consumers is represented by TUOS charges). Indeed, disallowing certain expenditure designed to remove or avoid limits on the transmission system, could in fact cost consumers orders of magnitude more in overall terms due to increased wholesale market prices, even over relatively short periods, caused by economic generation being constrained off.
- The development of a strong 500kV transmission system "backbone" is absolutely essential to the viability of the NEM and to delay this for any reason, be it either through incorrect technical analysis leading to incorrect decisions, or by introducing delays with heavy-handed new administrative procedures, will have serious actual consequences - if not within the current regulatory period, then certainly in the subsequent one.

Based on the above, TransGrid is looking to the Commission to give greater weight to our response to the SDD than appears to have been taken to date to its responses to the PB Associates (PBA) Final Report, and to make a number of important amendments before releasing its Final Decision. The transparency and objectivity of the Commission's process in arriving at the Final Decision are being closely observed. At this stage TransGrid has not excluded, from its available responses in relation to the Final Decision, the option of seeking a judicial review. Such is the importance attached by TransGrid to development of the NSW transmission system over the next 3-10 years.

The submission deals with the following issues in detail.

Issue 1 - The Regime Proposed in the Supplementary Draft Decision is Not Code Compliant and Therefore Unworkable
Issue 2 - Excluded Project 'Triggers' are Unsuitable
Issue 3 - The Process for Administering Revenue Cap Adjustments for Excluded Projects is Excessively Intrusive, Adds Unacceptable Delays, and Contravenes the Requirements of Section 5.6 of the Code
Issue 4 - The PB Associates so-called "Efficiency Factor" reduction to Small Augmentation Expenditure of 6.8% is Unsubstantiated
Issue 5 - 500 kV Expenditure Should Not Have Been Excluded
Issue 6 - Input Cost Movements in Relation to Changes in the Consumer Price Index
Issue 7 - Adjustments to Support the Business Capex for Unregulated Services
Issue 8 - Removal of the 7% Pooled Contingency Sum
Issue 9 - Expenditure Items which should be added to the Ex-Ante Cap
Issue 10 - No Detailed Spreadsheet Tables Included in ACCC SDD

Issue 11 - The Consideration of TransGrid's Comments on the Final PBA Report is Inadequate
Issue 12 - Treatment of Economic Depreciation, and the Role of Depreciation in the Incentive Mechanism, Both Require Adjustment
Issue 13 - Correction of Statements regarding TransGrid's Future Head Office Accommodation Strategies

This submission is to be considered in conjunction with TransGrid's response to the Final Report of PB Associates dated 14th February 2005. The recommendations to resolve each issue are set out below.

Issue 1 - The Regime Proposed in the Supplementary Draft Decision is Not Code Compliant and Therefore Unworkable

The Supplementary Draft Decision generally reflects the Commission's regulatory regime as set out in the Commission's Statement of Regulatory Principles. To implement this framework, as acknowledged by the Commission, appears to require Code changes. This, of itself, reflects very poorly on the Commission's processes.

To ensure that the full range of mechanisms for implementing the Commission's proposed regime in relation to TransGrid are available during TransGrid's current reset period it is recommended that:

1. The Commission allow a reasonable period of time for the NSW NEM Minister to consider and process TransGrid's Code derogation request before finalising the TransGrid revenue cap decision.

2. Upon receiving the derogation, the Commission undertakes the Trade Practices Act authorisation process of the derogation as quickly as possible, and ahead of making the final TransGrid revenue cap decision.

3. Conditions arising from Government review that are required to provide the NSW Government with confidence in the regime, to reduce uncertainty, and to ensure timely investment in transmission needed for TransGrid to meet its statutory obligations, are accepted and incorporated into the regime. Examples of such adjustments include:

    - The set of excluded project triggers be expanded to include generic classes of triggers for major new customer loads or generators not included for in establishing the ex-ante capital expenditure provisions.

    - Pass through arrangements be allowed for in relation to taxation events, demand side management payments, and generator support payments.

    - Streamlining of the process for administering an application for approving a revenue cap adjustment for an 'approved' an excluded project.

Issue 2 - Suitability of Excluded Project 'Triggers'

At the public forum on the Supplementary Draft Decision (SDD) held on 18th March 2005, TransGrid undertook to provide triggers for excluded projects which it believes are appropriate. Those triggers, together with some general observations on the excluded projects regime and the triggers proposed by the ACCC, are provided in the detailed section on Issue 2.

TransGrid has recommended a simpler, more generic approach to defining each of the relevant 'triggers' currently set out in Appendix E of the Supplementary Draft Decision. These alternative definitions are provided for possible inclusion in the final revenue cap decision.

TransGrid has also proposed the addition of generic triggers related to the connection of major new loads or generators not anticipated at the time of the original revenue cap decision.

Issue 3 - The Process for Administering Revenue Cap Adjustments for Excluded Projects is Excessively Intrusive, Adds Unacceptable Delays, and Contravenes the Requirements of Section 5.6 of the Code

The process proposed by the Commission needs to be reviewed in light of the requirements and clear intent of Section 5.6 of the National Electricity Code. Wherever possible the Commission should establish a process that allows it to undertake its required project assessment in the time frames provided for other interested parties under this Section.

In addition, TransGrid would recommend including more of the current levels of excluded project expenditure in the ex-ante provisions, particularly in relation to the establishment of the 500kV ring. This would result in reducing the overall extent to which these approval processes would be applied.

Finally, TransGrid recommends that the Commission reconsider its proposal to establish a 'mini' 5-year revenue cap determination for each 'approved' excluded project. This would reduce the extent to which the Commission would need to impose the additional administrative steps proposed in Appendix C of the SDD.

TransGrid's proposal is that once a revenue cap adjustment is made to accommodate expenditure on an 'approved' excluded project then this adjustment should only apply until the next major revenue cap review. Under TransGrid's proposed approach the forecast expenditure associated with each 'approved' excluded project applicable at the time of the next revenue cap decision would be 'wrapped' into the ex-ante provisions for the subsequent reset period.

Issue 4 - The PB Associates So-called "Efficiency Factor" Reduction to Small Augmentation Expenditure of 6.8% is Unsubstantiated

This matter can only be satisfactorily resolved by either the provision of a more transparent, detailed, and adequate justification in support of the Commission's decision, or reinstatement in the Final Decision of the amount removed by adoption of the 6.8% "efficiency factor" adjustment.

Issue 5 - 500 kV Expenditure Should Not Have Been Excluded

While there was no consensus on the precise sequencing at the pre-determination conference, there was consistent agreement that TransGrid needed to progress the time critical components of the 500kV ring as soon as possible. If it emerged that this was the Bannaby to Sydney line, then this would cost around $200 million, once land and easement costs are included. A similar cost would be incurred if a new line between Bayswater and Newcastle is developed.

TransGrid recommends that a minimum of an additional $200 million (compared with the recommendations in the Supplementary Draft Decision), associated with the development of NSW main system capability, be included in the ex-ante capital expenditure provisions.

Issue 6 - Input Cost Movements in Relation to Changes in the Consumer Price Index

TransGrid submitted that there are a number of forces at work that have the potential to cause the real costs of capital projects to rise over the current regulatory period. TransGrid submitted to the Commission that these factors created a material and asymmetric risk that forecasts of capital expenditure based on constant real unit prices would underestimate actual efficient expenditure.

The Commission has advised in the SDD that it considers there to be a number of problems with using a weighted average index of TransGrid's actual costs. The SDD states on page 87:

> *"The ACCC has indicated in the Statement of Regulatory Principles that it would consider proposals from TNSPs to mitigate forecasting error. Specifically, a TNSP may propose a capital expenditure allowance that is contingent on specified variables. The ACCC maintains that this is the appropriate framework for addressing potential forecast errors as part of revenue cap determinations."*

TransGrid wishes to resubmit that the Commission works with TransGrid and the industry in developing just such a mechanism for future regulatory periods, and that such information should be used in the context of the current regulatory period to inform an assessment of whether any material deviations from forecasts, should they occur, are the result of exogenous changes in real unit costs.

Issue 7 - Adjustments to Support the Business Capital Expenditure Provisions for Unregulated Services

Firstly, on the evidence provided in the Supplementary Draft Decision, the Commission's proposal to override PB Associates' recommendation and impose a 4.65% adjustment cannot be justified. Accordingly, the adjustment factor used for allocating support the business capital expenditure to unregulated activities should be the figure of 2.4% recommended by PB Associates.

Secondly, it is recommended that no ex-post adjustment be made to the value of the regulatory asset base as at 30 June 2004 until TransGrid has been provided with a proper opportunity to review both the basis for the methodology and the detailed application of the methodology. The rationale for adopting any methodology other than a marginal cost methodology would need to be included in such a review.

Issue 8 - Removal of the 7% Pooled Contingency Sum

In summary, TransGrid feels that it has made cogent arguments on matters relating to unforeseen costs, cost savings, symmetry of contingencies, and returns (the headings addressed by the Commission on pages 89 and 90 of the SDD).

TransGrid strongly recommends that the Commission reinstate the 7% Pooled Contingency Sum.

Issue 9 - Expenditure Items Which Should be Added to the Ex-Ante Cap

In relation to reconciliation of the final capex figures with the text of the SDD, TransGrid has found two apparent oversights, and one technical error, which need to be corrected in the Final Decision. The total amount of $9.56M needs to be added back into the ex-ante cap to rectify these errors.

Issue 10 - No Detailed Spreadsheet Tables Included in ACCC SDD

It is recommended that the Commission's Final Decision include *all detailed spreadsheets* as appendices to facilitate future reviews of project expenditure against the original decision, given that parties undertaking such a review may not be the same parties who are currently involved in the detail of this application.

Issue 11 - The Consideration of TransGrid's Comments on the Final PBA Report is Inadequate

There is little if any response by the Commission in the SDD to the large number of substantive comments within the TransGrid submission on PBA's Final Report, especially the contents of Attachment 4 (35 pages in total). Many of these comments challenge the basis of certain conclusions and assumptions on the part of PBA, which result in material reductions to

the ex-ante allowance, or in detailed interference in the planning role of TransGrid (referred to by one commentator at the Commission's pre-determination forum of 18 March as "micro-managing").

TransGrid is mindful of the timetable to which the Commission is now operating but it is not acceptable that consideration of these many issues appears to have been precluded.

Issue 12 – Treatment of Economic Depreciation, and the Role of Depreciation in the Incentive Mechanism, Both Require Adjustment

Firstly, the Commission's treatment of economic depreciation should be consistent with the methodology adopted in the Commission's original draft revenue cap decision dated 28 April 2004, as reflected in the provisions for return of capital in Table 5 on page 12 of that draft decision.

Secondly, given that TransGrid's submission proposed a simpler regime that appears to reduce distortions to incentives (some of which are admitted by the Commission) and can retain the same power of incentives, it is recommended that the Commission reconsider its position on this matter.

Issue 13 - Correction of Statements regarding TransGrid's Future Head Office Accommodation Strategies

This statement at page 24 in the SDD that *"... the relocation of head office staff from Sydney to Wallgrove is no longer proceeding"* is an incorrect interpretation of the wording contained in the PBA Final Report (bottom of page 43). The wording in the PBA Final Report should be used instead in the Final Decision, to more accurately represent TransGrid's position with respect to this issue.

Issue 1 – The Regime Proposed in the Supplementary Draft Decision is Not Code Compliant and Therefore Unworkable

Introduction

The Supplementary Draft Decision generally reflects the Commission regulatory regime as set out in the Commission's Statement of Regulatory Principles. To implement this framework, as acknowledged by the Commission, appears to require Code changes. This, of itself, reflects very poorly on the Commission's processes.

Key elements of the Commission's framework include the ability of the Commission to make adjustments within a reset period to accommodate excluded projects or unforeseen external events that create "windfall gains or losses" for the regulated business. There is also a residual need to make adjustments for other foreseeable classes of events such as taxation changes, demand side management payments and generation support payments.

In particular, there is a need for a streamlined process to accommodate transmission investment associated with the connection of any new major customer load or generator, that is not currently included in the ex-ante expenditure provisions. This matter is addressed further in the section of this submission in relation to the definition of excluded project triggers.

For unforeseeable events the Commission favours a 're-opening' process, possibly initiated by the regulated business for material events, where the impact of the event can be considered in the context of other external events that may have impacted positively or negatively on the business.

The Commission has advised that it believes that its current powers under the Code do not generally permit the Commission to make any of these classes of revenue cap adjustments during a reset period.

For TransGrid it is not acceptable to have a large proportion of potentially important capital expenditure subjected to an approval process that appears to be severely restricted by current Code requirements. In particular, there appears to be no mechanism for assuring a reasonable risk adjusted rate of return on this capital expenditure, even when it is considered to be efficient. Under the Code, TransGrid is entitled to sufficient revenue, on a prospective basis, to achieve this outcome.

As it stands, the Commission's interpretation of the Code appears to be that the revenue cap cannot be adjusted within a reset period. There are also doubts about the capacity of the Commission to bind the Commission to make the required adjustments at a future revenue cap decision. In essence, the Commission has deferred decisions on major capital projects, likely to be needed for TransGrid to meet its statutory obligations, to a future date without having a Code compliant mechanism for making the required decisions at that time.

Current Position

Since late last year, when the Commission published its Statement of Regulatory Principles, TransGrid has been working with the other NEM transmission businesses on a Code change application to provide an appropriate Code framework. Considerable progress has been made, but final agreement on the content of these important and far reaching changes is only just being finalised. There is now not enough time for these proposed Code changes to be processed under the normal Code change timetable before the Commission is required to make its final decision in relation to TransGrid's revenue cap.

To address this matter TransGrid has approached the NSW jurisdiction to consider seeking a derogation to the National Electricity Code under the provisions of Section 9. The content of the derogation is currently being reviewed within Government. While initially based on the Code changes already developed in consultation with other transmission businesses,

Government will need to be satisfied that the regime to apply within NSW will ensure adequate and timely delivery of transmission infrastructure. There is likely to be concern about the untested nature of the regime and the uncertainty about the operation of the proposed processes. Ensuring the continuation of reliable electricity delivery systems in light of continuing demand growth and new generation sources are key considerations.

While the time for Government to consider these important matters is short, as long as the framework is settled in a way that addresses the key concerns then the derogation process normally requires far less time than a Code change to complete.

Recommendation

To ensure that the full range of mechanisms for implementing the Commission's proposed regime in relation to TransGrid are available during TransGrid's current reset period it is recommended that:

1. The Commission allow a reasonable period of time for the NSW NEM Minister to consider and process TransGrid's Code derogation request before finalising the TransGrid revenue cap decision.

2. Upon receiving the derogation, the Commission undertakes the Trade Practices Act authorisation process of the derogation as quickly as possible, and ahead of making the final TransGrid revenue cap decision.

3. Conditions arising from Government review that are required to provide the NSW Government with confidence in the regime, to reduce uncertainty, and to ensure timely investment in transmission needed for TransGrid to meet its statutory obligations, are accepted and incorporated into the regime. Examples of such adjustments include:

    - The set of excluded project triggers be expanded to include generic classes of triggers for major new customer loads or generators not included for in establishing the ex-ante capital expenditure provisions.

    - Pass through arrangements be allowed for in relation to taxation events, demand side management payments, and generator support payments.

    - Streamlining of the process for administering an application for approving a revenue cap adjustment for an 'approved' an excluded project.

Issue 2 – Suitability of Excluded Project 'Triggers'

Background

At the conference on the Supplementary Draft Decision (SDD), TransGrid undertook to provide triggers (refer Appendix E of the SDD) for excluded projects which it believes are appropriate. Those triggers, together with some general observations on the excluded projects regime and the triggers proposed by the ACCC are provided below.

General

By definition some, if not most, aspects of projects nominated to be "excluded" are uncertain. Setting specific "triggers" for uncertain projects can be problematic. In these circumstances, there is a very real danger that, as the uncertainty around projects is resolved, the triggers may no longer be appropriate or even relevant.

In these circumstances, it is important to remember that the overarching objective is the timely and efficient development of the network to meet customer requirements (subject to Code and other statutory requirements). It is vital that the ACCC exhibits great care in setting triggers lest ill chosen triggers impede this objective.

The Supplementary Draft Decision is silent on how an excluded project would proceed if one or more of its the triggers cannot be satisfied due to them no longer being relevant. TransGrid is concerned that should inappropriate triggers be "locked in" as part of the ACCC's determination, they will impede TransGrid's ability to meet its statutory and customer connection obligations.

In general the triggers proposed by the ACCC are considered to be overly complex and there is anecdotal evidence that they cannot be understood within the industry or by market participants.

Comments on the triggers proposed by the ACCC for specific projects are provided below, together with TransGrid's suggested triggers. In each case, following initiation of the trigger, the relevant project would be subjected to the normal regulatory approval process.

2.1 Royalla 330 kV

The triggers proposed by the ACCC are overly complex and risk impeding the project. For example, the request for a second supply point is unlikely to be expressed in terms of:

- "the need for two separate supply points and how deep that separation must be";
- "the N-1 or N-2 level that must be available continuously and after switching"; or
- "the % PoE forecast that this security of supply should be within".

Should these triggers be adopted, there is a very real risk that they will not be able to be satisfied because they are not relevant. In this circumstance, it is not clear how the project could be progressed.

Also, it is quite possible that the capability of embedded generation to supply part of the Canberra load will be considered by the organisation making the request as part of its determination of the required supply point capacity. Thus, the requirement to "explicitly and objectively demonstrate how existing or committed generation can be utilised to secure the Canberra load" is likely to be irrelevant.

From a practical perspective, the focus should be on ensuring that the Royalla project can be implemented in an expeditious fashion once a request for a second supply point is received.

Trigger

The "excluded project" process for this project would be triggered by receipt of the customer's request for a second supply point.

2.2 Increased Capacity to the Newcastle-Sydney-Wollongong Corridor

Again, the triggers proposed are overly complex. They also appear to be attempting to specify the scope of TransGrid's investigations and consultation documents.

The need for development of the main system between the power stations and major load corridor between Newcastle, Sydney and Wollongong would stem from the power transfer capability of the present system being reached under forecast load conditions.

Trigger

The "excluded project" process for this project would be triggered by planning studies showing a need for reinforcement at the lead-time required for development of the necessary works. The planning studies would need to cover the limitations imposed by line ratings between the Hunter Valley and Central Coast and by voltage control considerations in the NSW main system, as well as relevant development constraints such as fault level ratings within key major switchyards.

2.3 Holroyd Complex

The triggers proposed by the ACCC are essentially that joint planning shows that Holroyd related developments are part of the optimal network development. In this sense they are sensible. However, they overstep the mark in attempting to prescribe the nature of joint planning activities that should be undertaken, and the options which should be evaluated.

We note that the requirement to demonstrate that "all opportunities to economically defer investment through short term network and non-network solutions have been exhausted" can only be satisfied after the regulatory test has been completed as the application of the regulatory test provides an opportunity for proponents to put forward non-network options for consideration.

The Commission's decision to not consider Limitation 2 as a trigger for development of a 330/132 kV substation at Holroyd is misguided. A 330/132 kV substation may be required to satisfy three needs, of which the ACCC appears to have only considered one. Those three needs are to:

1. relieve the loading on Sydney West 330/132 kV substation;
2. facilitate a major refurbishment of Sydney West substation; and to
3. replace 132 kV transmission capacity to Holroyd should Mason Park substation be developed and some of the lines which presently operate at 132 kV to supply Holroyd be converted to 330 kV operation.

More appropriate triggers are described below.

2.3.1 Holroyd 132 kV Switching Station

The need for development of Holroyd 132 kV Switching Station would be expected to emerge to support the Integral Energy load in the Parramatta area.

Trigger:

The "excluded project" process for this project would be triggered by joint planning work with Integral Energy showing a need for reinforcement at the lead-time required for development of the necessary works.

2.3.2 Holroyd 330/132 kV Switching Station

The need for development of a 330/132 kV substation at Holroyd would be expected to emerge in order to off-load the transformers at Sydney West 330/132 kV Substation or to replace 132 kV line capacity to Holroyd as a result of conversion of one or more of the existing circuits to 330 kV operation. As this latter condition is related to supply to the inner metropolitan area, it is covered by that trigger.

Trigger:

The "excluded project" process for this project would be triggered by planning studies showing a need for reinforcement of the transformer capacity at the lead-time required for development of the necessary works.

2.3.3 Supply to the Inner Metropolitan Area

The need for development of the supply system to the inner metropolitan area would be expected to emerge in response to load growth in the area. There are a number of options for network development including supply from the west via Holroyd (which may require establishment of Holroyd 330/132 kV substation) and supply from the northern Sydney area. There are also a number of options for minor network development that may defer major expenditure.

Trigger:

The "excluded project" process for this project would be triggered by joint planning studies with Energy Australia showing a need for reinforcement of the system at the lead-time required for development of the necessary works.

2.4 QNI Upgrade and Yass Wagga Transmission Line

The need for development of the interconnection with Queensland and or interconnection with Victoria would be expected to emerge following analysis of the benefits of upgrading the interconnections, either to facilitate operation of the market or to allow New South Wales loads to be supplied from interstate sources.

Trigger:

The "excluded project" process for these projects would be triggered by planning studies showing sufficient economic benefits or the works being required to supply New South Wales loads.

General Triggers

From time to time TransGrid has been required provide increased transmission capability on its shared network in response to major new customer loads. These loads can arise at relatively short notice and are often of significance to the economic development of the State or a regional area within the State. Such loads cannot always be predicted at the time of a revenue cap decision.

The re-opening mechanism is potentially excessively burdensome method for accommodating such changes and would reduce TransGrid's ability to meet its statutory duty to encourage development within NSW. Accordingly, a revenue cap adjustment using the excluded projects process (that does not involve re-opening the entire revenue cap determination) would be a more appropriate approach. This also applies to major new generator connections that are not predicted at the time of the main revenue cap decision.

TransGrid proposes the adoption of a generic excluded project trigger that initiates a project in response to a load or generation development which was not accommodated in the previous reset and which has a material detrimental impact on TransGrid's and that represents an increment of load or generation is greater than or equal to 10 % of the maximum demand or generation at the relevant connection point.

Recommendations

The Commission and their advisers, PB Associates, have identified a set of substantial projects to be treated on an excluded basis. These are projects that, if required, are of vital importance to TransGrid being able to meet its statutory and other obligations to the community. It is therefore important that the processing of these projects for incorporation into TransGrid's revenue cap is not unduly impeded by overly restrictive definitions of the triggers.

Details of the need for the project, evaluation of the options, and the setting of appropriate expenditure targets are all matters that will be addressed in detail as part of the regulatory test process and Commission assessment process. It is, therefore, not necessary to confuse the definition of triggers with these considerations.

To address these concerns TransGrid recommends a simpler, more generic, approach to defining the relevant 'triggers' currently set out in Appendix E of the Supplementary Draft Decision. These alternative definitions are provided above for possible inclusion in the final revenue cap decision. The triggers adopted should also include the proposed generic excluded project trigger for projects associated with a major unforeseen new load or generator, also described above.

Issue 3 – The Process for Administering Revenue Cap Adjustments for Excluded Projects is Excessively Intrusive, Adds Unacceptable Delays, and Contravenes the Requirements of Section 5.6 of the Code

Introduction

Reference is made the Commission's proposals included in Appendix C of the Supplementary Draft Decision. These proposals cover the process for assessing an application to have an adjustment to TransGrid's revenue cap to provide revenue for an excluded project that has been 'triggered'.

TransGrid notes that these arrangements involve active intervention by the Commission in the project appraisal process covered by Section 5.6 of the National Electricity Code. This appears to be counter to the intent of these provisions that make Transmission Network Service Providers accountable for meeting network service outcomes, and, therefore, vest responsibility for administration of the regulatory test with the Transmission Network Service Providers.

TransGrid also notes that these requirements add further steps to the existing project review process and potential additional delays in the development of transmission capability. Again, this appears counter to the intention of Section 5.6 of the Code that intentionally set tight time timetables for public consultation on projects being assessed. Notably, and of concern, the Commission has not imposed any specific obligations on itself to undertake its part of this process expeditiously.

Specific Comments on the Steps Proposed in Appendix C

Stage 1: Invoke the excluded event

Our prime concern is that the triggers proposed will, in many cases require the regulatory test to have been completed. For example, it would not be possible to satisfy a trigger which involves demonstrating that "all non-network options have been exhausted", without completing the regulatory approval process as that process (which includes application of the regulatory test) is one avenue by which non-network solutions are solicited and an integral part of assessing their availability and viability.

Due to the severity of the triggers proposed, it will often be necessary to have completed Stage 2 of the process (Investment Appraisal) before the requirements of Stage 1 can be satisfied.

This matter can be readily addressed by adopting the triggers proposed by TransGrid elsewhere in this submission.

Stage 2: Investment Appraisal

TransGrid has a number of concerns about the Commission's proposal to intervene in the appraisal process.

First, we note that the ex-ante regulatory regime was actually supposed to reduce regulatory intrusiveness, rather than to replace one form of intrusion with another. Also, it is not clear how increased regulatory intervention fits with the concept of (light handed) incentive based regulation.

Secondly, the existing regulatory consultation process, set out in Section 5.6 of the Code, for New Large Network Assets is quite protracted and already involves two rounds of consultation with interested parties. The Commission's proposal to intervene to require "a further level of detail" in the analysis and the introduction of additional consultation would add unnecessarily to lead times, which are already of concern. One of the difficulties posed by increasing lead times is increased uncertainty due to the need to plan further in advance. Another is lessened flexibility to respond to emerging and changing circumstances. At the pre-determination conference on the Supplementary Draft Decision customer representatives and generators clearly expressed a desire for transmission to be developed in a more responsive manner than is currently the case.

Thirdly, we note that during this reset, the Commission's advisors have, in some instances, adopted an unusual approach to network planning and development, to the extent of actually recommending counter productive measures. We take it that the Commission concurs with this unusual approach as some of the resulting shortcomings have not been addressed despite them having been raised by TransGrid with the Commission on more than one occasion. On this basis, we fear that rather than improving the project evaluation process, the involvement of the Commission and its advisers may actually be detrimental.

Stages 3, 4 and 5

These stages also appear to involve steps that are additional to current Code provisions for project approval and that provide potential for additional delays in project execution.

Further more the intent of Stage 5 difficult to understand. Consequently, clarification is required before meaningful comments can be made. It would also be helpful if the ACCC could give guidance on what it considers to be outcomes that are "substantially different to the forecast" and what it considers to be an "extreme case".

Recommendations

The process proposed by the Commission needs to be reviewed in light of the requirements and clear intent of Section 5.6 of the national Electricity Code. Wherever possible the Commission should establish a process that allows it to undertake its required project assessment in the time frames provided for other interested parties under this Section. Clearly, the Commission is entitled to receive relevant information within a reasonable time frame to carry out its assessment. However, the Commission ought to be bound to providing reasonable notice of any requirement for additional information.

In addition, TransGrid would recommend including more of the current levels of excluded project expenditure in the ex-ante provisions, particularly in relation to the establishment of the 500kV ring. This would result in reducing the overall extent to which these approval processes would be applied.

Finally, TransGrid recommends that the Commission reconsider its proposal to establish a 'mini' 5-year revenue cap determination for each 'approved' excluded project. This would reduce the extent to which the Commission would need to impose the additional administrative steps proposed in Appendix C of the SDD. It would also reduce the administrative burden of managing multiple revenue cap decisions that are out of synchronism with the main revenue cap reviews. TransGrid's proposal is that once a revenue cap adjustment is made to accommodate expenditure on an 'approved' excluded project then this adjustment should only apply until the next major revenue cap review. Under TransGrid's proposed approach the forecast expenditure associated with each 'approved' excluded project applicable at the time of the next revenue cap decision would be 'wrapped' into the ex-ante provisions for the subsequent reset period.

Issue 4 – The PB Associates so-called "Efficiency Factor" reduction to Small Augmentation Expenditure of 6.8%

Despite provision by TransGrid of extensive and detailed justification of its cost estimating process, the Commission (Section 5 – Small Augmentations) has adopted a recommendation by PB Associates to remove approximately $40 million from the ex-ante capital expenditure provisions.

TransGrid comment on "5.5 ACCC Considerations"

TransGrid has previously expressed, in writing and at the public forum held on March 18, strong concerns regarding the incorporation of the poorly named "Efficiency Factor" of 6.8% on augmentation costs, a reduction of $40million to the overall program. Quite detailed comments were first recorded in TransGrid's response to the draft PBA report in January 2005. These were expanded in a separate letter to the Commission dated 11/02/05, and again in the formal response dated 14/02/05 to the PB Associates Final Report as published on the Commission's website.

As these documents are available for the public record, it is not proposed to repeat the previous arguments in these current comments on the Commission's SDD. Instead it is desired to outline the sequence of the "process" undertaken and highlight the lack of true consultation that has occurred, and lack of transparency existing.

The sequence is as follows:

- PB Associates acknowledged the process of unit cost build-up by TransGrid from past, completed projects. PBA observed however that historical costs may contain "abnormal or outlying occurrences" – although admitting that averaging over a wide range of projects and time was likely to mitigate any abnormalities.

- The scoping factor of 10% which was applied to unit costs arose *specifically* because that approach was found to yield results that were consistently below the actual market-tested experience – over a wide range of projects and time. Not to do so would have been foolhardy at best, and poor practice at the worst. PB referred to the scoping factor and the reasons for its application, but then simply removed it. As 32% of augmentation costs relate to plant & equipment, the 10% "efficiency" factor was applied to the remaining 68% of costs, yielding the 6.8% downward adjustment to total augmentation costs.

- Page 19 of the PBA report refers to the NSW Treasury guidelines and that TransGrid's substation and line costs were 6.5% and 17% higher respectively, *although acknowledging the limitations of such comparisons in relation to design and equipment ratings.* As previously advised to the Commission in a letter dated 11/02/05 and repeated in its response to the Final PBA Report on 14/02/05, TG was able to demonstrate to PBA *prior* to the issue of its final report that after adjustment to ensure a more like-for-like comparison, TG's costs were in fact 6.8% *less than* those in the Treasury guidelines. This was supported by the inclusion of detailed calculations and commentary, by TG, in its January 2005 response to the draft PBA report. *Regrettably, this response was ignored - the final PBA report failed to refer in any way to these calculations and discussions.*

- PBA then used the Treasury report to compare Energy Australia's costs – of little relevance to the TransGrid exercise since all Energy Australia's assets are 132kV and below – and, not surprisingly, found alignment within a small margin. This was then used to justify that PBA's assertions regarding a 6.8% reduction to TransGrid's costs were well founded.

- Finally, the Commission's view as stated in its SDD (page 41) is that it " …. finds no basis for the conclusion (by TransGrid) that PB Associates relied primarily on the NSW Treasury Guidelines." If so, this therefore voids the only empirical – although challengeable - basis for the removal of the scoping factor.

TransGrid regards failing to mention that its costs were in fact lower than the Treasury guideline "equivalent" to be a serious breach of process. It appears to TransGrid that rather than bringing an objective view that TransGrid's costs *may* be inefficient, there is an inherent assumption by PBA that the costs *must* necessarily be inefficient, and so reductions must be applied. Arguments are then developed around that predetermined outcome. However *there is nothing "expert" about the arbitrary removal of the 10% figure by PBA.* TransGrid for its part took an empirical approach in deriving its own estimates and found the scoping factor to be necessary to produce realistic estimates based on past experience. It has not been refuted or demonstrated to be in error. Estimates must be based on *something* – if not historical costs, based on competitively tendered contracts, then on what should they be based?

PBA appear to have selectively used information to suit a predetermined outcome. The "expert" review in many cases constitutes no more than an alternative opinion supported by intuition and without detailed empirical evidence. This is contrary to the principles established by the courts in relation to an expert opinion.

There are many instances where TransGrid's considered, valid and detailed responses to issues appear not to have received appropriate, genuine consideration. The Commission's SDD states on page 40 that "*PB Associates has provided detailed comments on TransGrid's response covering TransGrid's proposed small augmentation program, which are available on the Commission's website. These have been considered by the Commission."* TransGrid has not had the benefit of seeing these comments since they have NOT in fact been published on the Commission's website as stated (as at 22nd March 2005), nor in fact was TransGrid made aware that such comments had been offered.

TransGrid takes very seriously its statutory obligations. The arbitrary reduction of $40 million to the small augmentation part of the program by the Commission places TransGrid in the unacceptable position of deciding between spending on such programs to maintain system reliability levels and foregoing a return on the above-ex-ante component of such expenditure (a situation unacceptable to its shareholder), or taking the risk of the consequences of not carrying out some projects (unacceptable to TransGrid). At a time when much has been said about light-handed regulation and the recognition by the Commission itself " … of TransGrid's jurisdictional and NEC obligations to maintain existing reliability standards" (page 41), the removal of $40 million on what TransGrid considers to be an unsupported basis is viewed with the gravest concern.

There is a third alternative open to TransGrid and, given both the significance of the amount and the level of risk, one which TransGrid is prepared to seriously consider – and that is to include this matter with other possible matters for judicial review.

Recommendation

In our view this matter can only be satisfactorily resolved by either the provision of a more transparent, detailed, and adequate justification in support of the Commission's decision, or reinstatement in the Final Decision of the amount removed by adoption of the 6.8% "efficiency factor" adjustment.

Issue 5 - 500 kV Expenditure Should Not Have Been Excluded

Introduction

This Section of TransGrid's response explains why TransGrid's original revenue cap application in relation to the NSW 500kV ring system development was reasonable. TransGrid's application proposed that at least $194 million of expenditure be included in the ex-ante expenditure provisions in relation to this development. The ACCC has determined that it is an "excluded" project.

Background

TransGrid has recognised the long-term need for the development of a 500 kV ring in NSW. The Eraring – Kemps Creek 500 kV line was the first link developed. The Bayswater – Mt Piper and Mt Piper – Marulan links were subsequently developed but operated at 330 kV to defer expenditure on the 500 kV terminals.

In its application TransGrid set down the case for upgrading of the Bayswater – Mt Piper – Marulan system to 500 kV operation and identified the need for ongoing development of the northern link (Hunter valley to the coast) and southern link (Bannaby to Sydney). The additional northern and southern link would be developed as new generation emerged in NSW. The issue is that the sequence of line development is closely linked to the sequence of committed generation developments.

TransGrid identified the need for supply reinforcement within the Regulatory period to meet load growth in NSW, particularly to address line loading limitations between the Hunter Valley and coast and to address voltage control limitations on the NSW main grid.

PB Associates correctly acknowledge that development of the 500kV ring will be required in the next 3 to 10 years. However, they have not recommended the inclusion of any funds at all for this vital strategy within the ex-ante targets. As a result the Commission has incorrectly proposed to treat all provisions associated with the 500kV ring on an excluded basis.

The reasons given on page 60 of the Supplementary Draft Decision for this position appears to be:

> *"TransGrid has not provided any evidence of why there is a high probability of any one element [of the 500kV ring] proceeding and it did not address any of the fundamental issues raised by PB Associates on the timing of the need for this augmentation."*

The Commission then states:

> *"For the ACCC to determine an ex-ante allowance in this case it would need to make decisions on the probabilities of various outcomes and then an assessment of the range of possible investments needed to respond to those outcomes. At this point, TransGrid has not developed a base of information on probabilities or investment options that would allow the ACCC to confidently make such judgements on TransGrid's behalf."*

This submission addresses each of these matters in turn and, as such, should provide the Commission with the necessary information to include an appropriate ex-ante provision for this vital strategy.

Evidence of a Pressing Need to Develop the 500kV Ring

There are three key issues that appear to have led to the "exclusion" of expenditure provisions for the 500 kV ring project:

- Analysis by Mountain Associates and PB Associates did not fully address the evidence presented.
- The risks of delays in main system transmission development outweigh the costs.
- Constraint costs have been ignored.

Each of these is explained in turn.

The Mountain Associates / PB Associates Analysis was Incomplete

Overall the Mountain Associates / PB Associates' analysis appears to have been incomplete on a number of key points. In particular it was argued that TransGrid has not fully evaluated all the development options. They cited the potential for generation in the Newcastle - Sydney - Wollongong area, and the possible development of a 330 kV line from the Hunter Valley to the coast or Bannaby to Sydney (500 kV lines operating at 330 kV) as examples of the options not adequately considered.

In coming to this position there does not seem to be an adequate assessment of the impact of these proposals on stakeholders, including the risks associated with pressing for a 'just in time' regime for main system transmission development within NSW. It was clear from presentations to the public pre-determination conference that customers are already paying a wholesale market premium as a result of NSW base load generation being constrained off by some power transfer capability limitations on the NSW main system. It was also clear that neither generators nor customers were enthusiastic about these costs increasing over time as a result of emerging constraints on the main NSW transmission system. Despite this Mountain Associates/PB Associates proposed that these cost increases would be needed to encourage generation in specific locations as alternative to network development.

In relation to local generation options in the Newcastle - Sydney - Wollongong area, the Mountain Associates/PB Associates report did not include any assessment of the likelihood of such generation being developed in the correct location, at the required time or of sufficient quantity to relieve transmission limitations. The environmental restrictions on generation in the greater Sydney basin are expected to be determining factors on the feasibility of generation development and this has not been addressed. Again, presentations at the pre-determination conference identified these factors as being significant limitations. Presentations by generators also noted the importance of fuel cost, water resources, and other factors in the generation siting decision process. Again, Mountain Associates/PB Associates do not appear to have considered these highly relevant matters in coming to their conclusions.

The Hunter Valley to coast line development option proposed by PB Associates does help address the emerging line loading thermal and voltage limits, but raises issues of fault level ratings at Liddell and Bayswater. PB Associates acknowledged this latter issue but failed to recognise the difficulty and cost of any remedial works. The Commission also failed to understand that the cost of such line works exceeds the cost for upgrading the western 500 kV system. Further, TransGrid has pointed out that the lead-time for new line development is such that the required timing could not be met with current planning approval processes.

Similarly the Bannaby – Sydney line alternative provides a solution to the network limitations but could not meet the required timing.

TransGrid has also indicated that for either line to be developed there needs to be relevant committed generation developments, as the NSW environmental impact statement process cannot be completed if there are uncertainties about the relative merits of the line option to address an identified need.

These are very important oversights. It is central to TransGrid's position on project sequencing. The fault level limit needs to be addressed early in the development sequence to facilitate subsequent 500 kV development stages. Significantly, it must be addressed before any major new line between the Hunter valley and the coast can be built.

TransGrid's proposal includes the introduction of 500 kV generator transformers at Bayswater Power station and this must be coordinated with the scheduled outage of Bayswater generators. Adopting this approach also completes a time critical step in lifting the Bayswater-Mt Piper-Marulan line operation to 500 kV. The estimated cost of introducing the 500 kV transformers at Bayswater is about $50 million[1].

The Risks of Transmission Delays Outweigh the Costs

Much is made in the Commission's Supplementary Draft Decision of the impact of TransGrid's proposed capital expenditure on average transmission charges. However, consensus among stakeholders at the pre-determination conference appeared to favour a broader view. Even customer representatives raised concerns that increasing costs of constrained generation and increasing reliability risks were possibly more important considerations. Industry commentator, Dr Robert Booth, even went as far as proposing increased returns on strategically critical transmission projects.

Further, and if transmission developments are delayed for any reason, including development consents, or ACCC reviews of excluded project applications, unacceptable levels of reliability risk emerges. As one commentator at the pre-determination conference put it "just in time" transmission development is a risky business.

Constraint Costs Have Been Ignored

The facts are that increasing load in the Newcastle - Sydney - Wollongong area will lead to increased constraints on the main NSW transmission system over time. While this may be relieved temporarily by establishing generation in this region, there is no real prospect of the next base load generation source occurring in this region. Evidence was produced at the pre-determination conference that average wholesale market pool prices have already increased by more than $1 per MWh due to main transmission system capability limits. This compares with less than 20 cents per MWh to develop the entire 500kV ring.

The Base information on the Probabilities Is Available

The Commission's statement that *"TransGrid has not developed a base of information on probabilities or investment options that would allow the ACCC to confidently make such judgements on TransGrid's behalf"* is simply incorrect. In fact TransGrid developed its application on the basis of 43 "Backgrounds" or scenarios of generation development that were developed with input from the ACCC.

There may be a number of possible reasons for this misunderstanding, including the way in which TransGrid's application was presented, involvement of new personnel at the commencement of the PB Associates' review, or misinterpretations of the facts during the short, but intensive, review by PB Associates.

The fact remains that a probabilistic analysis of TransGrid's future capital expenditure requirements was conducted in accordance with the framework agreed to with Commission staff (and Mountain Associates) in the period leading up to the submission of TransGrid's revised capital expenditure application. The transmission development requirements and

[1] As set out in TransGrid's response to the PB Associates draft report – see Section 3 Major Issue 5

associated capital expenditure profiles were developed for each of 43 separate power system development scenarios (backgrounds).

This framework is fully described in TransGrid's revised capital expenditure application (November 2004). An outline of the process for determining the probabilities associated with each background (scenario) is set out on Page 24 of Attachment 6C of that application.

It is relatively straightforward to use this existing data to calculate the probability weighted expenditure requirements associated with the 500kV ring projects. These calculations have been provided to the Commission under separate cover. These show that application of this method would result in the inclusion of $360 million associated with the 500kV ring strategy being included in the ex-ante provisions, well above the $194 million proposed in TransGrid's revised capital expenditure application.

Funding Sought in TransGrid's Application is Justifiable and Should be Included

TransGrid's revised capital expenditure application sought inclusion of $194 million in the ex-ante provisions for the regulatory period ending 30 June 2009. This was on the basis that the lifting the operating voltage of the Bayswater – Mt Piper – Marulan line from 330kV to 500 kV would be the first stage of the development of the 500 kV ring. This total was based on detailed work scopes and cost estimates prepared for this project. The remaining projects associated with the ring were proposed for treatment as excluded projects on the basis that the sequencing of these projects is more dependent on the ultimate location of new generation sources.

However, as noted above, key stakeholders at the recent pre-determination conference conducted by the ACCC pressed strongly for alternative sequencing. It was noted by some that early completion of a new link between Bannaby (near Marulan) and Sydney, would have immediate benefits in reducing generation constraint costs to the benefit of customers in the vital Sydney - Newcastle -Wollongong areas.

While there was no consensus on the precise sequencing at the pre-determination conference, there was consistent agreement that TransGrid needed to progress the time critical components of the 500kV ring as soon as possible. If it emerged that this was the Bannaby to Sydney line, then this would cost around $200 million[2], once land and easement costs are included. A similar cost[3] would be incurred if a new line between Bayswater and Newcastle is developed.

Whichever network development sequence is undertaken in relation to the 500 kV ring, a minimum of around $200 million of expenditure appears to be the efficient level of expenditure required on this project during the current regulatory period. If the probability weighted analysis, previously agreed to with ACCC staff and their advisers, is used (and there are no provisions for elements of the 500kV ring to be triggered as excluded projects) then this should rise to $360 million during the current reset period.

[2] TransGrid's revised capital expenditure application shows that, without property and easements, this line project would cost about $125 million in the 5 year period with a total cost of about $293 million. It also shows that around $136 million has been provided for land and easements associated with excluded projects. The majority of this cost is associated with the two new lines required to complete the 500kV ring.

[3] TransGrid's revised capital expenditure application shows that, without property and easements, this project would cost about $ 98 million in the 5 year period with a total cost of about $246 million. It also shows that around $136 million has been provided for land and easements associated with excluded projects. The majority of this cost is associated with the two new lines required to complete the 500kV ring. In addition, the estimated cost of works at Bayswater Power Station to relieve fault level limits at Bayswater and Liddell switchyards is estimated at about $50 million – as set out in TransGrid's response to the PB Associates draft report – see Section 3 Major Issue 5

The main alternatives to network developments in 2008/9 promoted by PB Associates included:

- Load control – via demand management or controlled load shedding
- Generation development
- Constraining generation dispatch

These alternatives are very 'market dependent' and highly uncertain in their scope and cost to TransGrid. Transmission considerations are typically minor to the third parties involved. Accordingly, any required network support payments are expected to be material.

With respect to generation development it is considered that this is unlikely to be in the correct location to avoid network development. In fact Connection Inquiries have been received for developments up to 1500MW which tend to force the need for 500 kV network development.

Nevertheless, if $200 million is included in the ex-ante expenditure provisions in relation to the 500kV ring development, then the likelihood of TransGrid needing to trigger an excluded project associated with the 500kV ring is substantially reduced.

The $200 million would also be seen as one means to fund the best alternative for supply reinforcement, whether that be a network development, DSM or generation development. The Regulatory Test is the vehicle for identifying the most appropriate development and remains a required part of the process for recognising the relative efficiency of various options.

Recommendation

TransGrid recommends that a minimum of an additional $200 million (compared with the recommendations in the Supplementary Draft Decision), associated with the development of NSW main system capability, be included in the ex-ante capital expenditure provisions.

Issue 6 – Input Cost Movements in Relation to Changes in the Consumer Price Index

Background

TransGrid submitted that there are a number of forces at work that have the potential to cause the real costs of capital projects to rise over the current regulatory period, including:

- a 36% increase in proposed capital expenditure in the Australian electricity transmission/distribution sector between 2004 and 2008 (estimated alone to be likely to increase real unit costs by more than 1.7% p.a. over the regulatory period);
- increases in the price of raw materials used in construction of transmission networks (partly driven by high Chinese demand for commodities, including copper and steel); and
- the additional pressure on industry wage costs due to the need to replace an ageing workforce.

TransGrid submitted to the Commission that these factors created a material and asymmetric risk that forecasts of capital expenditure based on constant real unit prices would underestimate actual efficient expenditure. TransGrid proposed to the Commission that there were three possible ways in which the regulatory regime could deal with this risk:

1. Link, on an *ex ante* basis, regulated revenues to an index of input costs (such as steel and copper costs, contractors' margins etc);
2. The Commission could commit to gather information during the regulatory period on how unit construction costs had changed over the period (with or without TransGrid's assistance). This information could then be used to assess whether any material *ex post* deviation from forecasts was due to exogenous changes in construction input costs; or
3. The Commission could, on the basis of currently available information, forecast the likely increase in real construction costs over the current regulatory period and use this forecast to set *ex ante* revenues.

TransGrid submitted that its preferred approach was a combination of option 2 and 3 above. TransGrid rejected option 1 on the basis that no index currently existed that was sufficiently robust to be used to index revenues on an *ex ante* basis. TransGrid preferred not to rely solely on *ex ante* forecasts (option 3) because, in its view, there was insufficient information currently available to be confident of accurately forecasting unit construction costs. It was argued that the combination of an *ex post* review if construction expenditure *materially* exceeded forecast would make it less critical that the Commission's forecast fully reflected the above asymmetric risks – which NERA estimated could result in real unit cost increases of 20% by the end of the regulatory period. However, if *an ex post* review was to be ruled out then it was incumbent on the Commission to reflect all the above risk factors in its forecast of unit construction costs.

TransGrid also noted that collection of information under option 2 would make it easier to implement either option 1 or option 3 in future regulatory periods (for both TransGrid and other TNSPs / DNSPs).

The Supplementary Draft Decision Misunderstands TransGrid's Proposals

Section 9.1 of the Supplementary Draft Decision is drafted on the premise that TransGrid sought implementation of option 1 above, i.e. the option that TransGrid rejected.

> *"TransGrid indicated in its Application that its capital expenditure allowance over the forthcoming regulatory period should be adjusted by indices other than the consumer price index. In particular, TransGrid has suggested that its maximum allowed revenue should be indexed to cost drivers that will affect the ex-ante cap in predetermined ways such as movements in construction rice indexes." (Page 86)*

The ACCC then proceeds to reject this option, partly on the same basis that TransGrid did, namely, difficulties in:

> *"identifying and applying an index of prices that accurately reflects changes to TransGrid's input costs." (Page 87)*

The Commission's Supplementary Draft Decision

The Commission's Supplementary Draft Decision departs from what TransGrid sought in three important ways:

- it assumes zero growth in real unit construction costs faced by TransGrid;
- it does not propose to gather information during the regulatory period that would allow it to better understand whether exogenous increases in real unit construction costs have occurred (ie, whether its assumption has been violated); and
- it does not propose any *ex post* review of should actual expenditure *materially* deviate from forecast expenditure (based on zero growth in real unit costs).

No real unit cost increases

The only reasons given for not forecasting an increase in real unit costs over the period are:

> *"…the ACCC considers that TransGrid should have factored in any anticipated real cost increases as part of its proposed capital program if it considered this to be a material risk.*
>
> *In addition the ACCC is not convinced of the materiality of the problem claimed by TransGrid: many of the components used by TransGrid in its construction are imported and therefore local demand is largely irrelevant; and contractor costs are generally a small proportion of the overall cost of projects which means that increases in their margins would not lead to significant changes in construction costs."* (Page 86).

This appears to be a very weak basis upon which to reject the evidence put forward by TransGrid. It is unclear why the fact that TransGrid did not raise this concern earlier gives the Commission a basis for rejecting submissions actually made. TransGrid's later submissions and evidence should be assessed on their merits.

Furthermore the Commission does not appear to adequately explain why it *"is not convinced of the materiality of the problem claimed by TransGrid".* TransGrid provided detailed argument, including statistical analysis, to suggest that the problem was material. TransGrid did not argue that it could forecast these cost increases with a great degree of certainty but it did argue that a 36% increase in industry activity was likely to put upward pressure on costs and that this was likely to be occurring at a time when other factors, such as the current commodities boom, would be increasing unit costs. The minimum TransGrid sought from the Commission was that it would collect information during the regulatory period that would assist it to assess whether TransGrid's concerns were actually borne out by events.

To provide a substantive basis for its position the Commission would need to forecast real unit construction costs and to explain how it arrived at that forecast. It is not sufficient for the Commission to simply state that it has not been convinced to move from a 'default' position of zero increase – especially in the current circumstances. A brief survey of the financial press over the last six months (refer Attachment A), would suggest the Commission is unique in believing that the risk of real unit costs rising in the electricity sector (capex and opex) are "not material".

Consistency with the Statement of Regulatory Principles

In footnote 9 on page 86, the Commission states that:

> *"It should be noted that in the Statement of Regulatory Principles, the ACCC indicated that it would consider proposals from TNSPs which provides TNSPs with reasonable protection against variation in efficient costs due to changes in underlying parameters (SRP 5.7 Capex incentive mechanism and Appendix E Capex-possible construction of a dynamically adjusting cap). "*

TransGrid was proposing such a mechanism. However, TransGrid recognised that the information simply was not available to introduce an *ex ante* form of such a mechanism in the current regulatory period. TransGrid's proposal was that the Commission becomes involved in the development of a unit cost index capable of being used on an *ex ante* basis in future regulatory periods and also capable of being used in any *ex post* review of capex in the current regulatory period – should it deviate *materially* from forecast.

TransGrid's proposal appears entirely consistent with the SRP. However, it is unclear that the Supplementary Draft Decision is consistent with the SRP. In particular, three of the five problems the Commission lists on pages 86-87 appear to be problems inherent in the SRP proposal. Specifically, we refer to problems associated with:

- *Identifying and applying an index of prices that accurately reflects changes to TransGrid's input costs;*
- *Increased complexity of the regulatory regime with potentially some costs such as operating costs escalated by forecasts and capital costs escalated by a specific index; and*
- *Lack of evidence to demonstrate that the reliance on forecasts of input cost changes systematically under-compensates the TNSPs.*

Moreover, the 'lack of evidence' in the last dot point is better described as a 'lack of information' and is precisely what TransGrid's proposal is intended to remedy. On the basis of the above, it is extremely difficult to understand the Commission's final paragraph on this issue:

> *"The ACCC has indicated in the Statement of Regulatory Principles that it would consider proposals from TNSPs to mitigate forecasting error. Specifically, a TNSP may propose a capital expenditure allowance that is contingent on specified variables. The ACCC maintains that this is the appropriate framework for addressing potential forecast errors as part of revenue cap determinations."* (Page 87)

Recommendation

TransGrid wishes to resubmit that the Commission works with TransGrid and the industry in developing just such a mechanism for future regulatory periods. In addition, such information should be used in the context of the current regulatory period to inform an assessment of whether any material deviations from forecasts, should they occur, were the result of exogenous changes in real unit costs.

Issue 7 - Adjustments to Support the Business Capital Expenditure Provisions for Unregulated Services

There are two issues:

a. On page 84 of the Supplementary Draft Decision in the Section entitled "Ring Fencing of the External Business" the Commission proposes that the ex-ante capex provisions be reduced by 4.65%. This is apparently based on the average ratio of operating costs associated with the unregulated business to TransGrid's total reported operating costs. However, this adjustment is contrary to the 2.4% adjustment recommended by PB Associates. Use of the revised adjustment factor (4.65%) is not justifiable.

b. On page 85 of the Supplementary Draft Decision in the Section entitled "Ring fencing of the External Business" the Commission proposes applying "this method of cost allocation, discussed above, to business support expenditure from the previous regulatory period."

Response to Issue 7a

TransGrid agrees in principle that some proportion of the Support the Business capital expenditure is related to the provision of unregulated services. From an economic efficiency perspective allocation should be on the basis of marginal costs. In general, using this allocation method would result in an almost negligible adjustment. For example, the cost of providing additional IT services for a small number of additional staff involved in unregulated activities would be much less than average costs of these services. The marginal cost of adding these people to e-mail services, the payroll system, accounting systems and so on is minor.

Accordingly, any of the allocation methods proposed by PB Associates, based on a cost averaging, would tend to significantly overstate the allocation to TransGrid's detriment.

In any event, PB Associates recommended a 2.4% allocation based on the ratio of unregulated revenues to total business revenues averaged over a number of years, with adjustment for one off impacts. While this approach almost certainly resulted in a higher level of allocation than would result from a marginal cost methodology, TransGrid accepts this approach as pragmatic, with an error that has a relatively small impact on the business. This is because the purpose of the calculation is to determine the relevant level of ex-ante capital expenditure provisions as part of an incentive mechanism, and because this error is not ultimately incorporated the regulated asset base.

TransGrid does not understand why the Commission has adopted an approach that produces an even larger error in the allocation factor than that implied by the PB Associates' allocation factor. TransGrid also notes that the Commission has not explained why it has adopted a different approach to that proposed by PB Associates that is substantially more detrimental to TransGrid.

Recommendation – Issue 7a

In summary, on the evidence provided in the Supplementary Draft Decision, the Commission's proposal to override PB Associates' recommendation and impose a 4.65% adjustment cannot be justified. Accordingly, the adjustment factor used for allocating support the business capital expenditure to unregulated activities should be 2.4%, as recommended by PB Associates.

Response to Issue 7b

As noted above TransGrid accepts the approach proposed by PB Associates in relation to the setting of an ex-ante capital expenditure provisions. In that context the approach is pragmatic, and the impact on the business of the error involved is relatively small. This is because the purpose of the calculation is to determine the relevant level of ex-ante capital expenditure provisions as part of an incentive mechanism, and because this error is not ultimately incorporated in the Regulated Asset Base.

However, a proposal to adopt this approach on an ex-post basis is entirely inappropriate. The impact of any error involved is material as it flows through to value of the Regulated Asset Base. If an adjustment of this nature is to be made on ex-post basis then it needs to be on a much more rigorous basis involving marginal cost considerations.

TransGrid is also entitled, as a matter of due process, to have a reasonable opportunity to comment on both the detailed methodology adopted and the way in which the methodology is applied, before a decision is made. This has not occurred in this case. Indeed, the treatment of historical capital has previously been subjected to a comprehensive assessment involving GHD and the Commission. At that time opportunities were provided for stakeholders to comment and this matter was not raised.

Recommendation – Issue 7b

It is recommended that no ex-post adjustment be made to the value of the regulatory asset base as at 30 June 2004 until TransGrid has been provided with a proper opportunity to review both the basis for the methodology and the detailed application of the methodology. The rationale for adopting any methodology other than a marginal cost methodology would need to be included in such a review.

Issue 8 – Removal of the 7% Pooled Contingency Provision

PB Associates removed TransGrid's entire Pooled Contingency sum. Despite TransGrid explaining in detail in its response to the Final PBA Report the justification for inclusion of this amount, the Commission has stated (at page 90) in its SDD that "... it will not include a contingency fund in TransGrid's ex ante capex program."

Without repeating the detail here, TransGrid nevertheless wishes to refer to its detailed response to the Final Report by PBA on this issue, to be found at Pages 2-3, 2-4 and 2-5 of Attachment 2. In summary TransGrid feels that it has made cogent arguments on matters relating to unforeseen costs, cost savings, symmetry of contingencies, and returns (the headings addressed by the Commission on pages 89 and 90 of the SDD).

Under Cost Savings (page 89) the SDD asserts that " … TransGrid has not clearly demonstrated that it is likely to incur significant real cost increases..." TransGrid disagrees strongly with this statement and observes further the evidence submitted by other stakeholders at the public forum on 18 March 2005 regarding above-CPI movements in the prices of copper and steel, for example, in the past 12 months. These price movements are factual, so the Commission's position seems to be totally outside reality in this area. This issue is dealt with in more detail elsewhere in this submission under Issue 6 – "Input Cost Movements in Relation to Changes in the Consumer Price Index".

Further, the SDD on page 90 under "Providing Returns" states that *"… the Commission has decided on a regime with a symmetrical incentive structure in which a TNSP would only lose the return on any overspend over its ex ante cap …".* TransGrid wishes to advise that, while it may be of no concern to the Commission that legitimate "over-expenditure" (for example that caused by market rates moving above the CPI due to supply-demand imbalance) does not attract any return on that investment, this is not a view shared by the TransGrid Board, nor by the jurisdictional shareholder. TransGrid would be interested to know from the Commission of any commercially driven enterprise whose Board would accept such a proposition.

It seems to TransGrid that the Commission's SDD has "got at" TransGrid on three levels. First, macro so-called "efficiency factor" adjustments have been made by PBA to reduce TransGrid's cost estimates. These are substantial, as outlined elsewhere. Secondly, valid comments by TransGrid (in its response to the Final Report by PBA) on other detailed, downward adjustments by PBA in relation to estimates have gone uncommented upon; and thirdly, the pooled contingency has been removed.

Recommendation

In our view this matter can only be satisfactorily resolved by either the provision of a more transparent, detailed, and adequate justification in support of the Commission's decision, or reinstatement in the Final Decision of the amount removed in respect of the 7% Pooled Contingency Sum.

Issue 9 – Expenditure Items Which Should be Added to the Ex-Ante Cap

In relation to reconciliation of the final capex figures with the text of the SDD, TransGrid has found two apparent oversights, and one technical error, which need to be corrected in the Final Decision. The total amount of $9.56M needs to be added back into the ex-ante cap as a result.

Details

Possibly because of the lack of detailed tables provided in the Commission SDD (see related issue following), three items appear to have been missed in the ex-ante cap. These were discussed informally with Commission staff on 17th March 2005.

1. Additional allowance for upgrade of Tamworth-Gunnedah line 875 from 66kV to 132kV

   The Commission, at page 36 of the SDD, have accepted PBA's recommendation to reconstruct 875 line at 132kV, & indicated that $26 million is included in the asset replacement program. In fact PBA only included $18.3 million in Appendix C of its Final Report (page 154, 7th last line) a shortfall of $7.7 million. This appears to be a simple oversight.

2. Glen Innes No.2 Transformer Replacement

   PBA recommended that the second Glen Innes transformer NOT be replaced, and thus reduced the expenditure allowance by $922, 708 (being $990,030 less the 6.8% arbitrary "efficiency allowance" commented on elsewhere by TransGrid in this response). However, as advised in TransGrid's comments on the Final PBA Report (see page 4-5 of 35 in Attachment 4 "Detailed TransGrid Responses to Specific Sections of the Report") the second transformer is necessary because, contrary to PBA's incorrect assertions in paragraph 2 on page 37 of its Final Report, the old transformer CANNOT be operated in parallel with the new No.1 transformer. Therefore the Glen Innes substation rebuild must include this amount for a new No.2 transformer, for technical reasons. It is noted that the old No.2 transformer will be used elsewhere within the system.

3. Wollar 330kV Switching Station

   The expenditure on this switching station is $15.14 million as contained in TransGrid's application. In its Final Report (page 99) PBA have agreed with the need for the project and this is confirmed in their detailed spreadsheet (Appendix C page 157) that shows a variance of $0 between TransGrid's proposal and the PBA recommendation. However the amount shown against this project on earlier pages (153, 157) is for only $14.2 million – the difference being $940,000 for the 04/05 year (left blank in the spreadsheet). As there are no comments to substantiate this reduction it is assumed to be an error of omission.

Summary of Expenditure to be Added back into the Ex-Ante Cap

Upgrade of Tamworth-Gunnedah line 875	$7.70M
Glen Innes No.2 Transformer Replacement	$0.92M
Wollar 330kV Switching Station	$0.94M
Total adjustment required	**$9.56M**

The indicative timing of the "missed" expenditure regarding line 875 is as follows:

04/05	$0.25M
05/06	$3.76M
06/07	$1.85M
07/08	$1.84M
08/09	$nil

Issue 10 - No Detailed Spreadsheet Tables Included in the Commission's SDD

The PBA Final Report included (at Appendices A - D) detailed spreadsheets providing the breakdown of recommended expenditure on a project-by-project basis covering most of the application. Some detailed schedules (especially regarding Property) could also have been added for completeness. However the SDD includes only summary tables, which makes it extremely difficult and time-consuming to reconcile the text with the summary figures.

It is recommended that the Commission's Final Decision include *all detailed spreadsheets* as appendices to facilitate future reviews of project expenditure against the original decision, given that parties undertaking such a review may not be the same parties who are currently involved in the detail of this application.

Issue 11 – Consideration of TransGrid's Comments on the Final PBA Report is Inadequate

Introduction

There are many instances where TransGrid's considered, valid and detailed responses to issues appear not to have received appropriate consideration, or where TransGrid has not been afforded the opportunity for dialogue with the Commission. While this may be due to time pressures, in most cases either the amounts involved, the principles, or both, are significant.

It seems to TransGrid that the PBA report has been reflected in the Commission's SDD with minimal alteration. In addition there is no commentary by the Commission on a large number of substantive comments within the TransGrid overall submission to PBA's Final Report, especially the contents of Attachment 4 (35 pages in total). Many of these comments challenge the basis of certain conclusions and assumptions on the part of PBA, which result in material reductions to the ex-ante allowance, or in detailed interference in the planning role of TransGrid (referred to by one commentator at the Commission's pre-determination forum of 18 March as "micro-managing").

TransGrid is mindful of the timetable to which the Commission is now operating but it is not acceptable that consideration of these many issues appears to have been precluded.

Examples include:

- The Commission's SDD states on page 40 that "*PB Associates has provided detailed comments on TransGrid's response covering TransGrid's proposed small augmentation program, which are available on the ACCC website. These have been considered by the ACCC.*" These comments have NOT been published on the Commission's website as stated.
- Attachment 4 to TransGrid's response to the Final PBA Report "Detailed TransGrid Responses to Specific Sections of the Report" contained 35 pages of quite detailed comments. That attachment is not repeated here for economy of space but can be considered as included in this response. The more significant of those detailed comments are expanded below, for emphasis, under the headings of "Small Augmentations" and "Major Projects".

Small Augmentations

The Commission has not provided a list of the small augmentations and associated allowances which have been included in the cap. Rather they have provided a table showing annual components of the aggregate allowance (in Table 5.6.1). As the components align with those proposed by PB Associates (shown in Table 5.3.2), it has been assumed that the Commission has adopted PB Associates' recommendations.

Comments on PB Associates recommendations and, where applicable, the Commission's commentary are provided below. In most cases these comments relate to factual errors in PB Associates' analysis, which have previously been brought to the Commission's and PB Associates' attention but have not been addressed by the Commission in the Supplementary Draft Decision.

1.1 Mid North Coast (Pages 34, 35, 43,44 and 45 of the SDD)

In their report to the Commission, PB Associates recommended that that lesser expenditure than requested by TransGrid be allowed. The amount recommended was purported to be a probability weighted average expenditure. It was calculated by assuming that there are equal probabilities of; the works proceeding as expected by

TransGrid, the works being delayed one year and the works being delayed two years. No basis for the assumption of equal probabilities was provided.

PB Associates acknowledged the need for works on the mid north coast but expressed concerns that the timing of those works is not sufficiently certain. The reasons for this uncertainty appear to relate to:

- The possibility of generation in the area (although PB Associates considers this to be unlikely).

- The possibility that a control scheme may be able to be developed to allow facilities in the Lismore area, such as Directlink or new sugar mill generation, to support the mid north coast area. This control scheme would coordinate the operation of reactive plant and transformer tapchangers at Lismore and the future Coffs Harbour 330 kV substations under some line outage conditions.

If it is possible to develop the control scheme (which is by no means certain), during outages of the section of 330 kV line between Armidale and Coffs Harbour, the section of 330 kV line between Coffs Harbour and Lismore would be able to be retained in service. This would aid in managing voltage levels on the mid north coast.

PB Associates made a number of errors in their assessment, which are discussed below.

There is No Sound Basis for Assuming that the Works can be Delayed

PB Associates treats the works a single "package" and assumes that the whole package may be able to be delayed. This is not correct. The works proposed are:

- Construction of a second line between Kempsey and Port Macquarie. On outage of the existing 132 kV line between Kempsey and Port Macquarie, Taree and Port Macquarie would be supplied from Newcastle. At times of high load, it would not be possible to maintain adequate voltage levels at Port Macquarie.

As there is presently a relatively small exposure to load interruptions for this outage, the need for a new line (or other measures to reduce the load) is clear. It should be noted that this requirement is independent of support which may be able to be provided (from Directlink or generation) to the Lismore area.

Consistent with the longer term requirements, it is proposed that the new line be mostly of 330 kV construction. However, it may initially operate at 132 kV.

- Construction of a 330 kV line to the mid north coast. This line would most probably utilise parts of the route of the existing 965 Armidale – Kempsey 132 kV line. Once completed, it and the new line between Kempsey and Port Macquarie would be used to supply a 330/132 kV substation in the Port Macquarie area.

Reconstruction of 965 line would be undertaken during a number of lower load periods over spring and autumn. 965 line would be returned to service over the higher load periods of summer and winter.

Prior to taking 965 line out of service for reconstruction, It would be necessary to convert the circuit of the existing Coffs Harbour – Nambucca – Kempsey 132 kV line which presently operates at 66 kV, to 132 kV operation. This would entail, inter alia, establishment of new 132 kV substations in the Sawtell, Raleigh and Macksville areas to replace existing Country Energy 66 kV substations.

This would provide two 132 kV circuits between Coffs Harbour and Kempsey. Without these works an outage of the existing Coffs Harbour – Nambucca circuit, during reconstruction of 965 line, would result in Taree, Port Macquarie, Kempsey

and Nambucca being supplied from Newcastle. Under these conditions, it would not be possible to maintain adequate voltage levels in the Port Macquarie/Kempsey/Nambucca area.

As indicated above, the need for and the timing of construction of a second Kempsey – Port Macquarie line is independent of support which may be able to be provided from the Lismore area. Consequently, the expenditure requested for construction of this line should be included in the capital works program.

The timing of operation of both circuits of the Coffs Harbour – Nambucca – Kempsey line at 132 kV and reconstruction of 965 line does depend on whether it is possible to develop the control scheme coordinating operation of reactive plant and transformer tapchangers at Lismore and Coffs Harbour 330 kV substations. If it is not possible, then the need for these works is pressing and expenditure as requested by TransGrid should be included in the capital works program.

If the control scheme can be implemented, reconstruction of 965 line must be completed by early in the next regulatory period. As indicated above this may take a number of spring/autumn periods to complete. Thus, expenditure will be required in the current period. It will also be necessary to complete the works to allow both circuits of the Coffs Harbour – Nambucca – Kempsey 132 kV line to operate at 132 kV in this regulatory period to permit 965 line to be taken out of service for reconstruction. Thus the expenditure requested by TransGrid, which is based on completing reconstruction of 965 line early in the next regulatory period, should be included in the capital works program.

Implicit Assumption that Non-Network Solutions Require No TransGrid Expenditure

PB Associates mentions the possibility of generation on the mid north coast and support from Directlink in its discussion on the uncertainty of the timing of network developments.

The implicit assumption is that such eventualities would enable the works proposed to be delayed, at no cost to TransGrid. This ignores the fact that network support payments (up to the value of the deferral benefits achieved) would be required by those providing the network support. The reality is that expenditure to either undertake the works or to provide network support payments to developments which may defer the works, would be required. In either case, the quantum of expenditure would be similar.

PB Associates' calculation of the probability weighted average expenditures is deficient in that it does not include the cost associated with delaying the mid north coast works. To enable the works to be undertaken or network support payments to be made, the expenditure requested by TransGrid should be provided.

Overall we consider that assuming impending network limitations can be accommodated by unidentified factors at no cost to be an unconventional approach to network planning and development. As the Commission has not addressed our concerns with this approach, we presume that the Commission endorses it.

1.2 Upgrade of 966 (Pages 36, 42 and 43 of the SDD)

The Draft Supplementary Reports states that:

"… owing to the uncertainty regarding the future upgrading of line 966, the ACCC has decided not to include the capital cost of the project from (sic) the cap at this time pending further advice from TransGrid".

As indicated in our response to the PB Associates report, TransGrid's view is that provision should be made for either network support payments to Directlink or for upgrading of 966.

As advised to the Commission in relation to Directlink Joint Ventures' application for conversion to regulated status, TransGrid is concerned about the capability for Directlink to provide firm network support to the Lismore area prior to completion of major augmentation of the networks supplying the Gold Coast/Tweed Shire area.

Powerlink is presently undertaking works which will increase capacity to the northern part of the Gold Coast, with the objective of completing them by summer 2006/07. Joint investigation of options to reinforce supply to the southern part of the Gold Coast and the Tweed Shire have been initiated. It is presently expected that limitations within the network supplying this area will restrict the ability of Directlink to provide firm support the Lismore area at times of high demand, beyond summer 2006/07, until other major works are completed.

In addition, over the past summer (2004/05) peak demands on the far north coast were greater than forecast. Unexpectedly high load growth increases the risk of supply interruptions should a critical contingency occur at times of high load. To mitigate this increased risk, TransGrid intends to proceed with uprating 966 line.

1.3 Nambucca 66 kV Capacitor Bank (Page 36 of the SDD)

PB Associates recommended that this project should not be included in the capital works program, the rationale (given on Page 85 of their report to the Commission) being that:

"TransGrid has provided additional planning studies that indicate the capacitor banks would provide voltage support on the combined outages of both 89 line Armidale – Coffs Harbour and the control scheme proposed for the area but PB Associates considers this to be a N-2 situation and providing a level of service in excess of the regulatory N-1 standard".

As previously advised, this statement is incorrect. The additional planning studies considered an outage of the Armidale – Coffs Harbour 330 kV line in the situation where it is not possible to implement the control scheme coordinating operation of reactive plant and transformer tap changers at Lismore and Coffs Harbour 330 kV substations. PB Associates acknowledge that it is not certain that the control scheme can be implemented.

The additional planning studies demonstrate that the Nambucca capacitors are essential if the control scheme cannot be implemented.

Turning to the case where the control scheme can be implemented, PB Associates acknowledge that the Nambucca capacitors would provide voltage support. We note that on Page 70 and 71 of their report to the Commission they state:

"Further studies performed by TransGrid at the request of PB Associates indicate that, if it is possible to implement the control scheme, the contingent overloads and low voltages could be managed via dispatch of generation at Lismore or import from Queensland through Directlink, and provision of additional reactive support. ..."

Thus, even if the control scheme can be implemented, additional reactive support (such as would be provided by the Nambucca capacitors) is still required.

In short, there is no reason to remove the Nambucca capacitors from the capital works program.

We note that while PB Associates state that the major works on the mid north coast proposed by TransGrid may be able to be delayed, not only did they not recommend any funding be provided for the (unspecified) works to permit that deferment, they actually recommend a counter productive measure (that the Nambucca capacitor banks, which would help to provide voltage support to the area, not be installed).

As our concerns have not been addressed, we take it that the Commission concurs with this unusual approach to network planning and development.

1.4 Tamworth Reactor Stage 2 (Pages 36, 37 and 45 of the SDD)

The Supplementary Draft Decision states, on pages 36 and 37, that:

"PB Associates notes that NEMMCO is responsible for the provision of black start generation in New South Wales and under existing arrangements has contracted two sources of black start generation in the south of the State. PB Associates therefore recommends that this investment not be included in TransGrid's capital program".

On pages 85 and 86 of their report PB Associates actually stated:

"PB Associates has reviewed the information supplied regarding the replacement of a 50MVAr capacitor bank at Tamworth that was scrapped last year after being out of service for several years beforehand. TransGrid has supplied information that the installation of the reactor would provide the capability to progressively restore supply to the Hunter Valley, western and central coast power stations from Queensland. This would facilitate more rapid restoration of supply to the state, particularly the area north of Sydney.

TransGrid have stated that the lack of black start sources for New South Wales is of concern to both itself and the New South Wales government. However NEMMCO has contracted only two sources of black start generation within New South Wales, both in the south of the state. By way of comparison, five sources have been contracted in Queensland and the ability to restore supply to sensitive loads to the north of Sydney is of particular concern.

TransGrid have also stated that this reactor would serve as an "in service spare" to cater for the failure of any of the six other 50 MVAr 330 kV shunt reactors in the state.

PB Associates notes that TransGrid have also supplied a legal opinion in relation to this project. PB Associates has formed the view that at this point in time NEMMCO has not altered its black start arrangements in New South Wales and therefore has not included this project in the recommended capital works program for the current regulatory period. However, the benefits outlined by TransGrid, particularly relating to increased speed of restoration of supply from Queensland, provided it was available, are not at issue.

PB Associates would recommend that in forming its opinion on the prudency and efficiency of this project the Commission obtain additional information from NEMMCO and independent legal advice on the need for this project".

It is not clear from the Supplementary Draft Decision whether, in reaching its decision, the Commission has obtained additional information from NEMMCO or independent legal advice as recommended by PB Associates or formed a view on TransGrid's proposal that the reactor be an "in service spare" for other similar reactors in its network.

We are stunned by the Commission's comment on page 45 of the Supplementary Draft Decision, in relation to managing of voltage levels in black start situations, that:

"The ACCC … is not aware of any requirements on transmission networks to manage voltage levels following a black start incident".

One of the difficulties in managing black starts is controlling voltage levels as the network is re-energised and supplies to customers are restored. Provision of voltage levels outside the acceptable range to customers is inappropriate. Also, even if customers are not affected, allowing transmission equipment to be exposed to excessive voltages is not good industry practice and risks damaging the equipment.

TransGrid's position is that managing voltage levels is critically important in a black start situation and that the second reactor should be provided for as it would be an "in service spare" and would enhance black start capability.

1.5 Sydney East, Sydney North and Sydney West Duplicate Breakers (Page 37 of the SDD)

In their report to the Commission PB Associates recommended (on Page 91) that this not be included in the capital works program as they consider it to involve increasing the reliability standard above N-1.

At Sydney South, Sydney East, Sydney North, Sydney West and Newcastle, coupling between the 330 kV busbars is provided by transmission lines which have connections to both busbars ("double breakered" lines). During the most recent major bushfires, the connection between the 330 kV busbars at Sydney South was lost when bushfires caused concurrent outages of both double breakered lines.

Works are required at these substations to provide coupling between the 330 kV busbars, independent of any transmission lines, to remove the risks posed by bushfires (or other adverse events).

This is a system security issue. Unintended "splitting" of 330 kV busbars has occurred during recent adverse system events, with associated risks to system security. TransGrid believes that it is good industry practice to heed the warnings of recent experience.

We take it that the Commission considers the risks to system security to be acceptable.

1.6 Cowra Transformer Replacement (Page 37 of the SDD)

Contrary to PB Associates assertion, based on the current load forecast (published in the 2004 APR), the firm capacity of the Cowra transformers will be exceeded in summer 2009/10, assuming that capacitors are installed to fully compensate the reactive load and the transformers have 10% cyclic overload capability in summer.

Works will be required within the current regulatory period to enable larger transformers to be installed at Cowra prior to summer 2009/10 and the expenditure requested should be included in the capital works program.

1.7 Dapto Substation, Additional 375 MVA Transformer (Page 37 of the SDD)

The Dapto transformers supply important industrial and commercial loads which have a high load factor. Difficulties in scheduling transformer maintenance have progressively increased as the load has grown. It is now necessary to arm load shedding schemes during major maintenance of the transformers.

TransGrid considers that it is not good industry practice to knowingly perpetuate a situation where major maintenance activities can only be carried out by placing large amounts of load at risk. Consequently, a fourth transformer is proposed.

We take it that the Commission considers the risks to be acceptable.

1.8 Kempsey 132 kV Transformers (Page 37 of the SDD)
Whilst installation of larger transformers at Kempsey is not required to be completed within the current regulatory period, some expenditure will be required. For example, an order for the transformers will have to be placed and initial design work undertaken.

The expenditure requested by TransGrid should be included in the capital works program.

1.9 Koolkhan 132 kV Transformers (Page 37 of the SDD)
Contrary to PB Associates assertion, based on the current forecast (published in the 2004 APR), augmentation of the Koolkhan transformer capacity is required by summer 2009/10 assuming that two 10 MVAr 66 kV capacitor banks have been installed and are in service and that the transformers have 10% cyclic overload capability in summer.

Works will be required within the current regulatory period to enable either larger transformers or a third transformer to be installed at Koolkhan prior to summer 2009/10 and the amount requested should be included in the capital works program.

Major Projects

1.10 Kemps Creek – Sydney South project (page 55 of the SDD)
In discussions with PB Associates TransGrid clearly set out the need for reinforcement of the system. The development of this system may be a progressive one and some of the options for initial stages may involve switching stations or application of high temperature conductors.

There is however no substitute for development of new high capacity overhead lines and this will eventually be required. New overhead lines require easements and these need to be acquired whilst this is still possible.

PB Associates provided no funds for acquisition of easements, acquisition of land for a switching station or environmental assessment activities.

The area to the south east of Kemps Creek and around Liverpool is being rapidly developed with housing and light industry.

As an example, one favoured option for line development passes immediately to the south of Liverpool 330/132 kV Substation. In recent discussions with Liverpool City Council, with respect to the rezoning of a portion of land in the area, it has become clear that if the easement for a transmission line is not obtained within the next six to eight months then this option will close and there will never be a line developed in this area.

It is expected that other areas between Kemps Creek and Sydney South will be progressively developed and all options for overhead line development will eventually be closed off.

TransGrid considers it essential to now obtain easements to provide options for the future.

The Mountain Associates / PB Associates comment that “there is a low probability that the acquisition of easement between Kemps Creek and Sydney South, during this regulatory period can be justified” is not supported by any evidence. It is

understood that Mountain Associates / PB Associates have not visited the area in question.

Certainly if overhead line development is precluded then other options, such as multiple cable developments, will be at higher cost to the community.

1.11 Western 500 kV Upgrade Pages 58 to 61 of the SDD)

The Commission's position appears to be based on a number of misunderstandings.

TransGrid views the western 500 kV upgrade as improving the power transfer capability of the system between the power stations and the load centres. However, the Commission has the view (fourth paragraph of Page 59) that:

"The initial 500 kV upgrade project does not achieve this, although it does help to balance the transfer, giving a brief respite".

It is not clear what is meant by "balance the transfer". Also, TransGrid does not agree that the respite is brief. The 500 kV upgrade provides a permanent increase in capability and the timing of the next development on the NSW system is then a function of generation development, its magnitude and location. TransGrid has applied probabilistic analysis to cover the many possible future scenarios.

In relation to the comment on Page 59 that:

"The ACCC understands that either of a new Hunter Valley – coast or Bannaby – Sydney line is likely to be significantly less expensive than the 500 kV upgrade";

We offer the following comments:

- TransGrid has pointed out to PB Associates that the results of analysis show that short circuit rating limitations preclude the development of these new lines prior to upgrading the western system to 500 kV operation or significant upgrading of a number of switchyards in the system;
- The new lines cannot be built to the timeframe required due to the constraints imposed by environmental processes;
- The cost of the Bannaby – Sydney line development in itself, excluding fault level work, exceeds the cost of the 500 kV upgrade;
- TransGrid has not accurately costed the works that may be required to upgrade major 330 kV switchyards and hence has not been able to provide the full cost of the new line development between the Hunter Valley and the coast. However it is expected that the full cost of such a development would exceed the cost of the 500 kV upgrade.

It is possible that the Commission has used the costs for the lines that may occur in the current Regulatory period as the full cost of the lines, however the Commission's attention is drawn to the full cost of the lines (without fault level work) that has already been provided.

The first two paragraphs of Page 60 and the second paragraph of Page 61 on probabilistic analysis also do not reflect the facts.

TransGrid developed 43 "Backgrounds" providing a probabilistic assessment of the future system requirements. These Backgrounds were discussed with the Commission during 2004, a number of papers were provided to the Commission during the development of the process and details of the Backgrounds were included in TransGrid's submission.

We are also concerned about the depth of analysis which the Commission seems to believe is necessary for a project to be included in the ex-ante cap and have

previously expressed this concern to the Commission. In this regard, we note the Commission's comments on Page 61 that:

"The ACCC does not expect that TransGrid should have completed the equivalent of a regulatory test evaluation before the ACCC would consider inclusion of a project in the ex-ante cap".

However we note that in the same paragraph the statement, in relation to 500 kV works, that:

"In this case the ACCC considers that a more comprehensive analysis including a probabilistic evaluation of all plausible alternatives including non-network solutions would be necessary before the ACCC could confidently make provision for this expenditure as part of the ex-ante cap".

Despite the first comment, the requirement of the second is that TransGrid has completed the equivalent of a regulatory test evaluation.

1.12 QNI Upgrade and Yass – Wagga Transmission Line

TransGrid included the QNI upgrade of 150 MW in the probabilistic scenarios or "Backgrounds" for meeting the future reserve requirements in NSW. The 150 MW increase is expected to be achieved at a cost which is competitive with open cycle gas turbine development.

The Yass-Wagga line development was included in some Backgrounds associated with increased supply from the south, again to meet the NSW reserve requirements.

Mountain Associates / PB Associates attempt to link these projects to augmenting capacity to the Newcastle – Sydney – Wollongong load corridor. TransGrid believes that whilst the interconnector upgrades may increase the loading on the main system they would not be expected to drive the need for augmentation to the load corridor.

With respect to the level of power passing from the north to south in the state, the generation in the Hunter Valley together with potential import from Queensland amounts to about 6000 MW. The 150 MW interconnection upgrade is relatively insignificant.

Similarly the 200-300 MW increase in import capability from the south afforded by a Yass – Wagga line (together with further works north of Snowy) would not be expected to drive major development of the 500 kV ring, given that the NSW region already imports over 3,000 MW from the south.

Mountain Associates / PB Associates indicate that there is potential for further transfers from Vic/SA/Snowy. In reality this system is already loaded to its full capability at times.

TransGrid has provided system studies that show high import from the south (above 3,000 MW) does not relieve the reactive power deficiencies on the main system.

The Commission expects that neither of the interconnection upgrades are likely to progress during the coming regulatory period. Hence NSW must continue to rely on the existing interconnector capability for import. It is noted that PB Associates, in their report to the Commission, expected that the works required to maintain the present capability for NSW import on QNI (TransGrid proposed a phase angle regulator) could be deferred by one year or more. There is a contradiction here of which the Commission needs to be mindful.

If no new interconnection capability is permitted by the Commission, the forecast future reserve shortfall in NSW would need to be met by the development of NSW generation.

1.13 Holroyd Complex

The Commission has drawn heavily on the reports prepared by PB Associates and by Mountain Associates/PB Associates. We have addressed the triggers for the Holroyd related works in our comments on triggers.

None the less, we disagree with some aspects of the Mountain Associates/PB Associates report and these are discussed below.

The Holroyd complex of works can be broken into three components:

1. Establishment of a 132 kV switching station at Holroyd to connect new Integral Energy 132 kV cables supplying the Parramatta area.

2. Establishment of 330/132 kV transformation at Holroyd to reduce the loading on Sydney West 330/132 kV substation. This could be required to facilitate a major refurbishment of Sydney West (which is now 40 years old) and/or because the loading on Sydney West exceeds the firm transformer capacity.

3. Establishment of Mason Park 330/132 kV substation, supplied from Holroyd. This may be part of a development to reinforce supply to the inner metropolitan area including the CBD.

In relation to the second component, Mountain Associates/PB Associates state that:

"Based upon information provided by TransGrid, limitation 2 (Sydney West transformers) will not occur until the next regulatory period. As such we do not consider that this limitation can be cast as a trigger for the development of 330 kV capacity at Holroyd during this regulatory period".

They then go on to state that:

"From the above, Holroyd 330 kV cannot be justified as a stand-alone project".

There are three deficiencies with this line of thought:

1. It ignores the possibility that expenditure may be required in this regulatory period to allow completion of the project in the next regulatory period.

2. It disregards the possibility that Holroyd 330/132 kV substation may be established to facilitate major refurbishment of Sydney West substation.

3. It disregards the possibility that if Mason Park substation is established, a 330 kV supply via Holroyd will be required. This could be provided by conversion of parts of existing lines (which presently operate at 132 kV) to operate at 330 kV. The attendant reduction in 132 kV capacity to the area may necessitate establishment of 330/132 kV transformation.

We have suggested a trigger for this component based on joint planning indicating that establishment of Holroyd 330/132 kV substation is part of the optimum development.

In relation to the third component, Mountain Associates/PB Associates state:

"It is noted that the studies provided by TransGrid indicate Limitation 3 to occur initially in 2008/09. It is reasonable to expect that following joint planning with EnergyAustralia, a smaller scale augmentation probably on EnergyAustralia's 132 kV network would be justified prior to a far more significant project such as the Mason Park development by TransGrid.

As such we consider the probability of the Mason Park development (and associated need for Holroyd 330 kV works) or a similar scale TransGrid project, to be low during this regulatory period. On this basis, we consider that it would be reasonable to suggest that no provision be made for any excluded expenditure in the Holroyd/Mason Park area during the regulatory period".

This reasoning is somewhat tenuous. It involves interpreting a loadflow which shows limitations in summer 2008/09 as indicating that those limitations "occur initially in 2008/09", assuming that the limitations can be overcome by (unspecified) works undertaken by EnergyAustralia, assuming that no expenditure by TransGrid would be required in this regulatory period and concluding that no provision should be made for any TransGrid expenditure.

TransGrid has suggested a more practical trigger for this component of the works.

TransGrid is mindful of the timetable to which the Commission is now operating but it is not acceptable that consideration of these many issues appears to have been precluded.

Issue 12a – Changes in the Calculation of Economic Depreciation in the Supplementary Draft Decision is Inconsistent with the Calculation of Economic Depreciation in the Draft Revenue Cap Decision Published in April 2004

Introduction

Table 10.3.2 on page 96 of the Supplementary Draft Decision contains significantly lower provisions for economic depreciation than contained in Table 5 on page 12 of the Commission Draft Decision published on 28 April 2004. While some of this difference can be accounted for because of changes in the provisions for future capital expenditure this does not explain the majority of the difference, particularly in the early years of the decision period.

Commission staff have subsequently explained that the difference results from modelling economic depreciation associated with capital expenditure within a given year on a 'back end loading' basis each year rather than a 'front end loading' basis. They argue that TransGrid should be indifferent because, after accounting for changes to the value of the regulatory asset base, the two methods are Net Present Value neutral over the life of the assets involved.

TransGrid's Response to Issue 12a

There are a number of problems with the Commission's position including:

- Inadequate process of consultation on the proposed changes
- Material and negative impacts on TransGrid's funding arrangements and dividends during the current reset period
- Arbitrarily reducing the level of economic depreciation has implications for the incentive characteristics of the regime

Each of these points is briefly explained.

Inadequate consultation

This matter first arose following the publication of the Supplementary Draft Decision on 2 March 2005. Without consulting TransGrid or other interested parties the Commission has made an adjustment to the modelling methodology previously provided to TransGrid and other TNSPs as the basis for calculating revenues. As far as TransGrid is aware other interested parties remain ignorant of this potentially material change. There is no explicit explanation of the modelling change in the Supplementary Draft Decision. Indeed, the Supplementary Draft Decision purports to deal only with changes in provisions for TransGrid's future capital expenditure. This falls well short of the standard of transparency and consultation consistent with proper administrative process.

Material and Negative Impacts on TransGrid's Financial Performance

While it is acknowledged that, over a long enough time frame, and assuming consistency of the regulatory parameters over time, the choice of method is Net Present Value neutral, the impact on financial outcomes within a five year period is material. The reduction in revenue that results has direct implications for funding arrangements and dividends to shareholders. This is particularly important for TransGrid because of the delays in finalising the current revenue cap decision. For example, TransGrid has already established dividend targets and established funding arrangements for 2004/05 in particular, and the current reset period generally, on the basis if the draft decision in 2004. Accordingly, material changes to revenue caps on an arbitrary basis create legitimate concerns for TransGrid's Board and shareholder.

These Changes Have Implications for the Incentive Properties of the Regime That Have Not Been Considered by Stakeholders

The Commission is proposing that actual financial depreciation above the provisions for depreciation determined by the Commission's Post Tax Revenue Model at the time of the revenue cap decision be foregone. This is intended to strengthen the incentive for transmission businesses to invest efficiently. The arbitrary reduction in economic depreciation adopted by the Commission in the Supplementary draft decision strengthens this incentive. This implication has not been consulted on with interested stakeholders including TransGrid and highlights another potential issue with using depreciation as part of the incentive framework. This concern is dealt with in more detail in the following section of this submission.

Recommendation

The Commission's treatment of economic depreciation should be consistent with the methodology adopted in the Commission's original draft revenue cap decision dated 28 April 2004, as reflected in the provisions for return of capital in Table 5 on page 12 of that draft decision.

Issue 12b – The Use of Depreciation in the Proposed Capital Expenditure Incentive Mechanism is Unduly Complex to Implement & Administer, and Distorts Incentives

Relevant Sections of the Supplementary Draft Decision

The Commission's discussion in section 9.2 is reproduced in full below.

"TransGrid has argued that the interpretation of the SRP with respect to the calculation of TransGrid's depreciation allowance during the current regulatory period is unclear, and that on one reading of the arrangement the SRP imposes an inappropriately high powered incentive regime to TNSPs to avoid investment in short-lived assets, where that investment is at levels over the level set under the ex-ante cap.

"This is because under the SRP a TNSP would lose actual depreciation on any investment in excess of the ex-ante allowance. Recovery of depreciation on assets with a shorter depreciable life will be limited by that shorter depreciable life.

"The ACCC has considered TransGrid's position. While the model outlined in the SRP does favour investment in long-lived assets if a TNSP overspends their capital allowance, the ACCC considers that this bias against short-lived assets is small and would not have a material impact on a TNSP's investment decisions.

*"**By not allowing a TNSP to recover the full depreciation on any overspend, the ACCC considers that the incentives to minimise costs are appropriately strengthened, and will lead to appropriate investment outcomes.** As mentioned earlier in this decision, the ACCC will require TransGrid to report on its actual level of expenditure at the end of the current regulatory period broken down into asset classes specified by the ACCC, to enable the appropriate adjustments to occur." (Emphasis added)*

TransGrid's Response

The Commission's discussion of TransGrid's submission is incomplete. It omits that, in addition to the distortion against investment in short lived assets which the ACCC has accepted exist, TransGrid's submission also argued that:

- In order for businesses to understand the incentives that are applied to them, the Commission would have to provide its own exhaustive i) 'depreciation schedule', ii) definition of assets in that schedule and iii) break down of the *ex ante* cap into those asset classes prior to the beginning of the regulatory regime;

- The regime creates incentives to waste resources in defining, monitoring and reporting the classification of capital expenditure and depreciation in the financial accounts. For example, businesses will have an incentive to classify expenditure as investment in longer lived assets wherever possible. Moreover, the Commission will have to pay consultants to review the classifications proposed by regulated businesses;

- The regime can create inefficiently strong incentives to delay expenditure – even if that increases the NPV of expenditure due to higher expenditure in later years; and

- These problems can all be avoided at zero cost to the power of the incentive scheme if the Commission simply defines the penalty/reward for over/under-spend as a

constant X% of the NPV of the over/under-spend – where that X% can be set at any level to achieve the desired 'power' of the incentive scheme.

Recommendation

Given that TransGrid's submission proposed a simpler regime that appears to reduce distortions to incentives (some of which are admitted by the Commission) and can retain the same power of incentives, it is recommended that the Commission reconsider its position on this matter.

Issue 13 – Correction of Statements regarding TransGrid's Future Head Office Accommodation Strategies

At page 24 of the SDD (first bullet point) it is stated that "... the relocation of head office staff from Sydney to Wallgrove is no longer proceeding."

This statement is an incorrect interpretation of the wording contained in the PBA Final Report (bottom of page 43). This latter wording should be used instead in the Final Decision, to more accurately represent TransGrid's position with respect to this issue.