SUBMISSION ON THE AUSTRALIAN COMPETITION AND CONSUMER COMMISSION'S REVIEW OF THE DRAFT STATEMENT OF REGULATORY PRINCIPLES

28 November 2003

TABLE OF CONTENTS

1 INTRODUCTION AND BACKGROUND 5

2 REVENUE CAP DECISION MAKING PROCESS 6

2.1 Extension of review process 6

2.2 Scope and content of revenue cap decisions 6

2.3 Appointment of consultants 7

2.4 Provision of the financial model 8

2.5 Appeal options for Commission decisions 8

2.6 Updating the SoRP 8

2.7 Implementing the revenue cap decision 8

2.8 Summary of Transend's proposals in relation to the revenue cap process 9

3 ASSET VALUATION 10

3.1 The Commission's approach 10

3.2 Transend's comments 11

3.2.1 Revaluation of assets 11

3.2.2 Length of lock-in 11

3.2.3 Valuation of assets constructed after jurisdictional asset valuation 11

3.2.4 Integration of approach 11

3.2.5 Problems with asset revaluations 12

3.3 Asset revaluation further issues 14

3.4 Depreciation 14

3.4.1 By-pass risk 14

3.5 Summary of Transend's proposals in relation to asset valuation 14

4 CAPITAL EXPENDITURE 15

4.1 Issues to be considered 15

4.2 The Commission's preferred position/comments 15

4.3 Transend's comments 15

4.4 Benchmarking 16

4.5 Suggested approach 16

4.5.1 Augmentation capex 16

4.5.2 Renewal capex 17

4.5.3 Roll-in to asset base – renewal capex 18

4.6 Summary of Transend's proposals in relation to capital expenditure 19

5 OPERATING AND MAINTENANCE EXPENDITURE 20

5.1 The Commission's current approach 20

5.2 Role of benchmarking 20

5.3 Suggested approach to setting O&M 21

5.4 Efficiency carry-over mechanisms 22

5.5 Self insurance and pass-through events 22

5.6 Summary of Transend's proposals in relation to O&M expenditure 23

6 INCENTIVE REGULATION 24

6.1 The Commission's approach 24

6.2 Lessons from the ESC in Victoria 24

6.3 Summary of Transend's proposals in relation to incentive regulation 25

7 BENCHMARKING 26

7.1 Issues raised by the Discussion Paper 26

7.2 Transend's comments 26

7.3 Summary of Transend's proposals in relation to benchmarking 27

8 WACC 28

8.1 The Commission's approach 28

8.2 The risk of further variations in the allowed cost of capital 29

8.3 International comparisons 31

8.4 Comments on WACC parameters 32

8.4.1 Maturity of the risk free rate 32

8.4.2 Beta 32

8.4.3 Benchmark credit rating and cost of debt 34

8.4.4 Market risk premium 34

8.5 Summary of Transend's proposals in relation to WACC 34

1 INTRODUCTION AND BACKGROUND

Transend welcomes the Commission's Discussion Paper and the opportunity to respond to the issues raised. In particular, there is considerable benefit in minimising regulatory uncertainty by stating clearly the methodology that the Commission will apply in regulating Transmission Network Service Providers (TNSPs). Ultimately, customers will benefit from the application of a regulatory regime which provides TNSPs with strong incentives to deliver the service that customers want at minimum efficient cost. Transend believes that the Statement of Regulatory Principles (SoRP) can make an important contribution to this objective.

The remainder of this document follows the same structure as the Discussion Paper:

- Section 2 briefly responds to the Commission's proposals to modify the revenue cap decision making process, and also raises some additional issues of concern
- Section 3 responds to the issues on asset valuation
- Section 4 discusses the issues relating to capital expenditure
- Section 5 addresses the issues on operating and maintenance expenditure
- Section 6 considers the issue of incentive regulation
- Section 7 discusses benchmarking
- Section 8 comments on WACC.

Transend has not specifically commented on the Commission's guidelines in relation to ring fencing, information requirements and service standards. Transend considers that these guidelines should be amended, as appropriate, to be consistent with the outcomes of the SoRP review.

2 REVENUE CAP DECISION MAKING PROCESS

2.1 Extension of review process

Transend agrees with the Commission that there is benefit in extending the timetable for a revenue cap review from six to twelve months. Experience has shown that the existing six month timetable has proved to be inadequate, and it is important that this shortcoming is addressed.

In making this observation, Transend recognises that it is in the interests of all parties that revenue cap decisions are of a high standard. Transend notes, however, that the duration of the review process is only one factor in determining the overall quality of revenue cap decisions.

In Transend's view, the completion of the SoRP should make an important contribution to the quality of future revenue cap decisions. In addition to setting out the regulatory methodology that the Commission will apply, the SoRP could consider broader aspects of the review process insofar as they affect the quality of the final decision. In particular, these broader issues include:

- the scope and content of the revenue cap decisions
- the appointment of the Commission's consultants
- the process for updating the SoRP
- access to the Commission's financial model
- appeal options for Commission decisions
- implementation of the revenue cap decision.

The remainder of this section considers each of these aspects in turn.

In making these observations, Transend assumes that a key objective in publishing the SoRP is to ensure that the Commission's decisions are consistent and of a high standard. It is noted, however, that the Discussion Paper does not explicitly describe the objective or purpose of the SoRP – apart from noting the Code requirement to produce such a document. In Transend's view, a clear statement of purpose is essential in ensuring that the scope and content of the SoRP are appropriate.

2.2 Scope and content of revenue cap decisions

Transend considers that the scope of the services the Commission intends to regulate when making revenue cap decisions should be clarified. Transend notes that although the Code does not provide clear guidance, the Discussion Paper makes no attempt to address this fundamental issue.

Transend has drafted a paper regarding its interpretation of the services that should be revenue capped in accordance with the Code, and the form this revenue capping may take. Transend is seeking external review of this paper and intends to provide the paper to the Commission shortly.

It is somewhat self-evident that the scope and content of the revenue cap decision are key aspects of the quality of the decision. Transend notes that clause 6.2.6. of the Code requires

the Commission to publish full and reasonable details of the basis and rationale of its revenue cap decision. In a sense, this clause sets some minimum standards for the Commission's revenue cap decisions.

In Transend's view, however, the Commission should supplement these minimum Code requirements with a clear statement of its own publication standards for revenue cap decisions. Such a statement would further clarify the scope and content of the Commission's decisions. For example, the SoRP could commit the Commission to ensuring that its revenue cap decisions:

- provide a comprehensive and detailed analysis of the relevant issues
- address and respond fully to the material issues raised by interested parties
- express well-presented and logically consistent arguments in support of the Commission's decision
- treat each revenue application on its merits and do not rely unduly on precedent to justify decisions
- explain any divergence between a revenue cap decision and the principles set out in the SoRP.

By formally setting out these publication standards in the SoRP, the Commission will help to ensure that each revenue cap decision is of a high standard. The Commission should assure itself that the publication standard is met prior to issuing draft and final revenue cap decisions. In addition, the Commission should extend its publication standard to reports produced by the Commission's consultants.

2.3 Appointment of consultants

The Commission's appointed consultants provide a critical input to the review process. In the absence of effective advice, the Commission's final decision will lack robustness, irrespective of the duration of the review process.

In Transend's view, consultants appointed by the Commission must have expertise in all of the following areas:

- the Code provisions regarding revenue caps and transmission
- the statement of regulatory principles
- operational engineering and operational experience of electricity transmission networks.

In addition to the consultants' expertise, it is also important that work is appropriately scoped and budgets set. Whilst Transend appreciates the budget constraints under which the Commission must operate, the long-term costs of obtaining inadequate advice could be severe. It is therefore important that the Commission develops a clear policy on its approach to appointing consultants and scoping work.

Transend has previously expressed its concern regarding the Commission's appointed consultants and their budget constraints. Transend firmly believes that the appointment of appropriately skilled and resourced consultants could make the most significant contribution to improving the quality of the Commission's revenue cap decisions.

2.4 Provision of the financial model

As part of Transend's present revenue cap application process the Commission provided Transend with a copy of the Commission's financial model used to calculate total revenue. This allowed Transend to review the model and clarify issues, including areas where Transend considered errors may have been made or inappropriate treatments applied.

In addition, the Commission provided Transend with a copy of the model with inputs used in the Draft Decision. Once again, this allowed Transend to review the Commission's modelling and use of inputs.

Transend considers that provision of this model facilitated communication and understanding of an important aspect of the revenue setting process. Transend considers that the SoRP should require provision of the Commission's financial model to the relevant TNSP. Transend also considers that further clarity would be achieved if a generic version of this model were provided on the Commission's web site.

2.5 Appeal options for Commission decisions

Presently the Code makes no provision for merits reviews of Commission decisions. Transend considers that the revenue setting process is likely to be improved if TNSPs have access to merits appeal to a third party regarding the Commission's decisions.

A Code change would be required to introduce merits review. As part of the SoRP review process, Transend would appreciate the Commission expressing support for TNSPs seeking such a Code change.

2.6 Updating the SoRP

An important "quality" consideration is that the Commission's revenue cap decisions should reflect the SoRP. In this regard, Transend notes that the Discussion Paper states:

> "The *Statement of Regulatory Principles* is not legally binding and it must be accepted that, in line with achieving best practice regulation, the Commission's position on some issues may change. The Commission expects that the *Statement of Regulatory Principles* will evolve in response to improvements in regulatory models and best practice regulation worldwide." Discussion Paper, page iv

Whilst Transend accepts that the SoRP is not legally binding, it is important that there is a clear process for updating the SoRP in the light of developments in regulatory practice. The value of the SoRP is substantially diminished if it no longer reflects the Commission's approach to revenue cap decisions. It is therefore of some concern that the Commission has not updated the draft SoRP since its publication in May 1999. Transend urges the Commission to set out a clear process for updating the SoRP in future.

2.7 Implementing the revenue cap decision

Transend has also expressed concern to the Commission that the Commission's approach to implementing revenue cap decisions falls short of best practice. In particular, compliance with revenue cap decisions can only be assured if the decisions are properly described in a comprehensive revenue control formula. It is surprising, therefore, that the Commission has not yet addressed this issue.

The purpose of the revenue control formula is to provide an unambiguous definition of "revenue"; to define the pass-through arrangements; and to define the mechanisms by which under- or over-recoveries will feed through to subsequent years. In the absence of a revenue

cap formula, interested parties will need to refer to numerous sections of the Commission's final decision to understand how the revenue cap applies in practice. The drafting of a revenue cap also provides a discipline in ensuring that all relevant matters are addressed in the final decision.

2.8 Summary of Transend's proposals in relation to the revenue cap process

- Transend supports the extension of review period from six to twelve months.
- The Commission should provide a statement of its own publication standards for revenue cap decisions, over and above the requirements of the Code.
- The Commission should ensure that its appointed consultants have the appropriate skill sets and budget.
- The Commission should provide a copy of their financial model used to calculate revenue caps to the subject TNSPs. Additional clarity would be achieved if the model were available publicly.
- The Commission should indicate support for a Code change seeking merits appeal of the Commission's revenue cap decisions.
- The Commission should ensure that the SoRP is regularly updated so that it reflects the Commission's latest thinking. To achieve this outcome the Commission should set out a clear process for updating the SoRP.
- The Commission should undertake to publish revenue cap formulae to clarify how the revenue cap decision applies in practice.

3 ASSET VALUATION

3.1 The Commission's approach

For all first round revenue caps the Code stipulates that the Commission adopts the jurisdictional asset valuation, and for the second revenue and subsequent resets the Code provides for the Commission to revalue the asset base. The Commission does not have unlimited discretion in determining an asset valuation methodology, as the Code requires the Commission to satisfy a number of principles and objectives.

The Commission believes that there are three main options for *future reviews*.

- Option 1 – Periodic revaluation of the asset base on the basis of DORC
- Option 2 – Lock-in the jurisdictional asset base and add investment at cost
- Options 3 – One off revaluation of the jurisdictional asset base and then lock-in.

The Commission considers that the choice between these options depends largely on:

- the accuracy / appropriateness of the jurisdictional valuations
- the incentive effects of exposing TNSPs to periodic revaluations or any revaluation.

In particular, the Commission notes that there are a number of potentially adverse consequences with revaluing the asset base on a periodic basis:

- investment could be deterred as there is a possibility that the TNSP might lose some value of its capital expenditure
- it may slow down the rate of new investment as it generates uncertainty
- the TNSP might be encouraged to manipulate the information available to the regulator, so that the expected revaluation is systematically higher than the end-of-period RAB
- revaluation in the aim of addressing gold plating may be considered too heavy handed when instruments such as the Regulatory Test are already in place
- revaluation can result in a number of subjective choices being made.

On the other hand, the Commission has identified three specific reasons for a revaluation:

- the Commission may be unsure of the rigour and correctness of the valuation it has adopted from the jurisdiction
- periodic revaluation could provide superior allocative economic efficiency outcomes
- periodic revaluations address concerns in regard to possible over investment.

The Commission's preferred position is to lock-in the jurisdictional asset value at this stage.

The Commission raises a number of issues relating to asset valuation, including depreciation issues, and seeks feedback on depreciation approaches and by-pass risk.

3.2 Transend's comments

3.2.1 Revaluation of assets

Transend considers that sunk asset values should be locked-in, and therefore not revalued. The investment decision for these assets has already taken place, and therefore revaluing these assets, or the threat of revaluation, cannot improve the investment decision. Transend notes that the Commission is not able to guarantee a lock-in of asset values, as the Code allows the option of revaluation. A Code change may be necessary to achieve appropriate lock-in.

Transend considers that there is only a case to revisit jurisdictional asset valuations to establish the appropriate value of sunk assets where:

- the jurisdictional value exceeds deprival value or
- there are demonstrable errors in the valuation (eg exclusion of easement and transmission line acquisition values).

3.2.2 Length of lock-in

In discussions with the Commission's staff there have been differing interpretations of the lock-in period:

- from one extreme of lock-in only for the first revenue reset,
- to the other extreme of a lock-in for the remaining life of the assets.

Transend considers that the jurisdictional asset value should be locked-in for the remaining life of the assets. Such an approach will avoid regulatory uncertainty and will remove one of the largest uncompensated regulatory risks presently faced by TNSPs.

Transend considers that the Tasmanian Treasurer's jurisdictional asset valuation as at 30 June 2001 represents an appropriate valuation to lock-in for Transend. Although the value does not include brownfield factors, Transend considers that the jurisdictional asset valuation is reasonable. In its draft revenue decision for Transend's revenue cap, the Commission noted that the jurisdictional value did not appear to exceed deprival value.

3.2.3 Valuation of assets constructed after jurisdictional asset valuation

Transend does not consider that DORC valuations of capital additions are appropriate. It is better to establish systems and incentives to make TNSPs reach prudent investment decisions. Once these decisions are made, TNSPs should not be exposed to the possibility of future DORC devaluations. Transend considers that new capital expenditure should be rolled into asset base at cost, providing that the expenditure has been efficiently incurred. These matters are discussed further in Transend's comments on capital expenditure.

With a jurisdictional asset valuation that is locked-in, and capital included in the asset base at cost, the issues of "windfall" gains or losses on future re-valuations do not arise.

3.2.4 Integration of approach

It is important that, in finalising the SoRP, the Commission integrates its approaches to asset valuation, the regulatory test and capital expenditure. In particular, Transend's view is that:

- New capital additions that have passed the regulatory test should not be subject to DORC revaluations.

- Application of the regulatory test is superfluous where there are powerful incentives to minimise capital expenditure. Applying DORC revaluations to new capital additions where these powerful incentives exist, is therefore unnecessary and undesirable.

- Revaluation of new capital additions is only appropriate where:

  (a) there is no strong incentive to minimise capital expenditure; or

  (b) the regulatory test is not appropriately applied.

Transend considers that DORC valuations and application of the regulatory test are potentially inconsistent and represent regulatory 'double jeopardy'. In effect, if the investment decision is made on the basis of an appropriately applied regulatory test, revisiting this decision through a DORC revaluation only serves to introduce regulatory risk.

3.2.5 Problems with asset revaluations

Having recently undertaken an asset revaluation, Transend is aware of many of the weaknesses of the asset valuation methodology. One weakness is that the Commission has not provided much guidance as to how revaluations are to be conducted.

In preparing Transend's asset valuation, for review by the Tasmanian Treasurer, SKM noted:

> "In May 1999 ACCC issued a document "Draft Statement of Principles for the Valuation of Transmission Business". In this document it states that it has adopted the ODRC (also known as the DORC) methodology. This document has not yet been issued in final form. The ACCC have very little documentation which describes their recommended approach to asset valuations of network service providers.
>
> The New South Wales Treasury document "Policy Guidelines for Valuation of Network Assets of Electricity Network Businesses" issued initially in December 1995, has become the de-facto standard for the valuation of electricity distribution and transmission network assets in Australia. A draft revision of the document was issued in December 2001 as "Valuation of Electricity Network Assets – A Policy Guideline for NSW DNSP's, July 2001".
>
> Sinclair Knight Merz has conducted this valuation generally in accordance with these policy guidelines and the principles and practices adopted by Sinclair Knight Merz in carrying out similar valuations for other transmission Network Service Providers in Australia and New Zealand.
>
> There are four (4) key elements of the valuation process as outlined in the policy guidelines, viz
>
> - Defining and recognising assets.
>
> - Assessing the gross replacement cost of the assets based on the cost of modern equivalent assets.
>
> - Optimising, that is, adjusting the value of the assets of the network for overdesign, overcapacity and redundant assets.
>
> - Determining the optimised depreciated replacement cost of the asset based on an assigned asset life."

While the draft SoRP does not provide detailed guidance on how to undertake an asset valuation, in recent revenue cap decisions the Commission has provided comment on certain aspects of asset valuation, where TNSPs have sought corrections to existing asset values.

Transend notes that the asset valuation report undertaken by Allen Consulting Group (ACG) for the Commission concludes that:

> "Having regard to the merits of the ODRC methodology relative to rolling forward the asset base, we do not consider revaluations based on ODRC to be feasible in the short-term nor does it provide appropriate incentives for regulated transmission providers over the long term. A preferred approach is for the regulatory asset base to reflect the level of capital expenditure undertaken and return of funds received over the regulatory period – that is, the rolling forward methodology." ACG report, page 8.
>
> "Moreover, we do not consider that the application of [an ODRC] methodology is desirable in the longer term. Whether a transmission business would expect to recover the cost of continuing to provide the service – or expected to earn returns much larger than that required to justify its continued financing of the business – would depend upon the accuracy of the estimated ODRC value, for which substantial statistical uncertainty will be inevitable. Given the risks associated with estimation errors, it is difficult to see how the Commission could commit credibly to adhere to such a regulatory regime over the long term. As a consequence, we do not consider the ODRC revaluation methodology to be appropriate." ACG report, page 6.

Transend strongly agrees with the views expressed by the Commission's consultant. Transend also notes that one of the most striking aspects of the Commission's review of asset values is that the Commission has not applied the DORC valuation methodology consistently, nor followed its draft SoRP, but rather appears to have "cherry picked" by:

- generally endorsing valuation of assets using the DORC methodology, and
- expressing a strong preference for valuing those assets that increase over time (easement compensation values, transmission line acquisition costs) at indexed historic cost.

The Commission's approach penalises transmission companies for any 'windfall' *decreases* in asset value, as a result of:

- technological change
- movements in unit capital prices or
- optimisation of assets that are sized to meet strategic needs.

However the approach fails to reward the companies for any 'windfall' *increases.*

The Commission's asymmetric approach extends further, as in discussions with Transend the Commission has expressed the view:

- that it is not reasonable to depreciate an asset by *more* than the cost paid by the TNSP (eg if an asset's value is increased in a DORC valuation),
- however it is quite feasible to depreciate an asset by *less* than the cost paid by the TNSP (eg if an asset's value is decreased in a DORC valuation).

Transend considers that the Commission's approach to asset valuation should avoid asymmetry.

3.3 Asset revaluation further issues

Should the Commission move away from its preferred position of locking-in the asset base, noted earlier, Transend would seek the opportunity to raise further detailed comments regarding revaluation issues. These issues include:

- Demonstrating that brownfields valuation is not inconsistent with economic principles: Transend is concerned that by valuing assets at replacement cost, asset revaluations tend to undervalue transmission assets, where these assets are constructed in an incremental fashion. Transend is particularly concerned that DORC valuations do not recognise the "brownfields" factor associated with much augmentation and renewal of the transmission system.

- Recognition that the Commission's approach to "refurbishment" expenditure has gone only part way to addressing brownfields issues.

- Considering appropriate valuation of easements, substation acquisition costs and transmission line acquisition costs.

- Considering appropriate treatments for any revaluation increases or decreases.

- Increasing the WACC to ensure that the significant, and presently unremunerated, regulatory risk associated with asset revaluation is recognised.

3.4 Depreciation

Transend considers annuity (or competition) depreciation, while theoretically sound, to be complex to implement and administer in practice. Continued use of straight-line depreciation will reduce complexity for TNSPs, the regulator and customers alike.

3.4.1 By-pass risk

By-pass risk is a concern in the electricity industry, as it threatens the TNSP's ability to make appropriate returns on prudent investments. Transend considers that the Commission should make provision to allow for recovery of prudent investment, by allowing accelerated depreciation for stranded assets, or by allowing the asset to remain in the asset base (which would result in lesser price shock).

3.5 Summary of Transend's proposals in relation to asset valuation

- Transend supports the lock-in of jurisdictional asset values.

- Transend does not support DORC revaluations, noting the conclusions of the report by Allen Consulting Group.

- If the Commission chooses to revalue assets, then consideration should be given to the brownfields issue.

- Transend considers continued use of straight-line depreciation will reduce complexity for TNSPs, the regulator and customers alike.

- Transend considers that stranded assets should be appropriately remunerated to ensure that TNSPs achieve appropriate returns on prudent investments.

4 CAPITAL EXPENDITURE

4.1 Issues to be considered

- Capital expenditure is an important revenue driver
- Code is not prescriptive as to how new or proposed capital expenditure should be reflected in the asset base
- Need to define capital expenditure and operating expenditure
- Existing approach is to roll-in actual (as opposed to forecast) capital expenditure into the asset base
- The Commission is seeking views on whether or not the capex amount to be rolled into the asset base should be based on the outcome of the regulatory test, or based on actual build costs
- The Commission is seeking views from interested parties on how the Commission should deal with under or overspend on the allowed capex from the previous period
- The Commission notes that there may be alternative approaches to assess capex, such as the use of benchmarks. Comments are invited.

4.2 The Commission's preferred position/comments

- Revenue caps will accommodate new investment if proposed capex programs satisfy the regulatory test
- Proposes that the regulatory test apply to both augmentation and non-augmentation capex.
- The Commission notes that it cannot compel TNSPs to apply such a test during the regulatory control period. However, if a TNSP were aware of the criteria that the Commission would employ to assess capex for the purpose of rolling it into the regulatory asset base then the TNSP would adopt similar criteria.
- When assessing revenue proposals associated with new capex programs, it will assess the likelihood of whether or not it will pass the regulatory test.
- At each regulatory reset, review whether the regulatory test applications were conducted in accordance with the process and methodology outlined in the regulatory test.
- The Commission's preferred position is summarised as follows:
    - The Commission's preferred position is to adopt the regulatory test when assessing and reviewing revenue proposals associated with augmentation and non-augmentation capex programs.
    - TNSPs who voluntarily assess replacement or refurbishment capital expenditure against the regulatory test will not face optimisation risk.

4.3 Transend's comments

The Commission's preferred position appears overly simplistic and does not address the complexities and inter-relationships associated with capital and other regulatory building

blocks. Any capex rules that the Commission develops must be consistent with the treatment of asset valuation, depreciation, the role of the regulatory test and incentive mechanisms.

Transend considers that the Commission needs to clarify the basic concepts that will apply to regulating capital expenditure:

- To what extent will underspend of capital expenditure (compared to the allowance in the revenue cap) be clawed back at the end of the regulatory period?
- How will overspending of capital expenditure be treated at the end of the regulatory period?
- What is the appropriate scope of the regulatory test, given the incentive properties provided by the asset creation and valuation principles to be adopted by the Commission?

4.4 Benchmarking

Transend does not consider that benchmarking of capital expenditure is likely to be practical for network augmentations. This is because augmentation tends to be lumpy and not strongly related to historic expenditure, or to the expenditure levels of other TNSPs.

It is possible that benchmarking may be appropriate for renewal capital expenditure. Benchmarking should be against strategies and practices of TNSPs internationally, rather than against other renewal 'dollars' spent by TNSPs (which typically have very different networks from one another) or against past expenditure levels.

If the Commission seeks to clawback any capex underspend, then using simplistic benchmarking to establish capex allowances may lead to inappropriate capital spending, as the TNSP has no incentive to under-spend.

4.5 Suggested approach

Transend considers that the issues associated with capex are complex, and careful development of detailed rules is required to ensure that TNSPs are rewarded for efficient investments. Transend has not worked through all the details of its proposed approach, but is happy to work further with the Commission to ensure that the scheme meets the needs of customers and investors.

Transend considers a 'hybrid' approach to network capital expenditure may be appropriate whereby:

- **Augmentation capex** is forecast on a *probabilistic* basis as part of the revenue cap setting process.
- **Renewal capex** is forecast on a *benchmarked* basis.

4.5.1 Augmentation capex

Transend does not support the Commission's proposal to undertake an ex-ante assessment of whether augmentation (and renewal) projects will pass the regulatory test. As the test is complex and as the five year planning period is reasonably long, it does not appear feasible to make such an assessment in advance. Instead, the Commission should provide a probabilistic-based allowance for projects likely to proceed over the period.

Given that much of the required augmentation expenditure is outside a TNSP's control, the capex allowance should only be considered as a reasonable guide. TNSPs should not bear windfall gains or losses based on forecasting errors for this type of expenditure.

At the commencement of the next regulatory period, the asset base should recognise actual augmentation expenditure plus an adjustment for any forecasting error in the previous period, with the following provisos:

- TNSPs should be prepared to justify any over-spend of the regulatory test augmentation amount.

- TNSPs may make a case for retaining as an efficiency gain any under-spend of the regulatory test augmentation amount.

For any prudent over-spend of augmentation capex, at the commencement of the next regulatory period:

- The TNSP should recover the shortfall in the depreciation allowance (ie the gap between the allowed depreciation and actual depreciation)

- The TNSP should recover the shortfall in the allowance for return on assets (ie the gap between the allowed return on assets and actual return on assets). Note: this lost return should also factor in the equity and debt-raising costs.

For any under-spend of augmentation capex, at the commencement of the next regulatory period:

- The TNSP should return the unspent depreciation allowance (ie the gap between the actual depreciation and allowed depreciation)

- The TNSP should return the "over-recovered" return on assets (ie the gap between the actual return on assets and allowed return on assets). Note: this additional return should also factor in the equity and debt-raising costs.

For simplicity, and to minimise regulatory risk, Transend suggests that these adjustments are included in the Po changes at the commencement of the next regulatory period.

It should be noted that this form of regulation provides lower incentives for TNSPs to reduce augmentation capex spend compared to the Commission's allowance. However, customers are protected by applying the regulatory test prior to the investment decision, and requiring the TNSP to justify any over-spend above the regulatory test figure.

4.5.2 Renewal capex

While renewal capex spending also has a lumpy profile, Transend considers that it is possible to make reasonable predictions of expenditure over a regulatory period. Such forecasts may be considered a "benchmark" renewal capex allowance, taking into account the system's renewal requirements. Such benchmarks should take into account:

- the age and condition of the TNSP's existing assets

- the applicable connection arrangements and obligations

- safety, environmental and other legal obligations

- strategies and practices of TNSPs internationally.

It is noted that the *benchmarks* should reflect a range of available information and analysis, rather than relying on simple partial indicators such as "$ renewal capex per line length" or "average renewal capex per asset base".

Details of the capex incentive scheme associated with the benchmarked amount would need to be worked out, so that TNSPs have sufficient incentive to reduce capex at all stages of the revenue determination period.

4.5.3 Roll-in to asset base – renewal capex

For renewal capex, the asset base at the next regulatory period should also reflect the <u>actual</u> level of renewal capital expenditure incurred and actual straight-line depreciation. As for augmentation capex, this will align with regulatory accounts provided to the Commission, based on actual expenditure and depreciation levels.

However, distinct from the treatment of augmentation capex, the TNSP should be rewarded for any under-spend and penalised for any over-spend of its renewal capex allowance. In the case of renewal capex over-spend, this will mean that the additional capital will be rolled-into the regulatory asset base with some "notional" depreciation applied.

The only proviso to this high-powered incentive scheme is that the Commission should undertake a high-level ex-post review to ensure that the TNSP neither benefits nor is penalised:

- in the case of an underspend, whether the "work done" is materially less than forecast by the TNSP
- in the case of an over-spend, whether the "work done" is materially more than forecast by the TNSP.

Transend acknowledges that there are some issues with this scheme. In particular, the issue of deferral of renewal projects to the next regulatory period, by introducing more sophisticated condition monitoring *or* deciding to take more risk, creates problems in determining the TNSP's efficiency. While the TNSP should be rewarded for this capital deferment, and should also be able to claim the renewal capital in the subsequent regulatory period, customers may be wary that capex claims will unfairly include a "bow wave" effect.

There may therefore need to be some mechanism where efficiencies resulting from deferment (rather than long-term reduction) in capital costs are shared between TNSPs and customers.

Under both over and under-spend scenarios for renewal capex, the actual capital expenditure (minus straight-line depreciation) will be remunerated in future regulatory periods. This treatment provides symmetry in any over or under-spend of renewal capex.

Given the strong incentive properties of this approach to renewal capex, it is considered that:

- the TNSP should not be required to apply the regulatory test to this type of expenditure
- the Commission should not apply a high degree of scrutiny to the actual capex spend
- the Commission should undertake a broad review to ensure that any underspend does not reflect a much lower level of renewal activity than forecast – ie a scope reduction
- if the Commission finds that a TNSP has substantially reduced the scope of its renewal activity, then there should be clawback

- this scheme may to be combined with a more sophisticated service incentive scheme to ensure that there are appropriate incentives for undertaking efficient levels of capital expenditure.

Note: Irrespective of the incentive properties of the scheme adopted by the Commission, Transend considers the "full blown" regulatory test to be too unwieldy for justifying all renewal capex projects. Should the Commission wish to introduce a test for renewal capex, Transend considers that a simplified economic test should be developed.

In developing any procedure associated with assessing renewal capital, the Commission should be mindful of the following:

- Much of Transend's renewal capex arises as a result of connection agreement obligations.

- Security or reliability criteria may be an appropriate tool for justifying renewal projects, under the "cost effectiveness" arm of the regulatory test, but such criteria have not been finalised in Tasmania.

- The cost of conducting analysis under the "market benefits" arm of the regulatory test, including the process of consultation, is very high – and the benefits are unlikely to outweigh the cost for some projects.

4.6 Summary of Transend's proposals in relation to capital expenditure

---

- Transend considers a 'hybrid' approach to capital expenditure may be appropriate whereby:

    - **Augmentation capex** is forecast on a *probabilistic* basis as part of the revenue cap setting process, and adjustments are made for under or over-recoveries at the commencement of the next regulatory period.

    - **Renewal capex** is forecast on a *benchmarked* basis, and the TNSP has strong incentives to under-spend the renewal allowance by achieving capex efficiencies, as returns are retained by the TNSP.

- Transend does not consider simplistic benchmarking of a TNSP's capex against its past capex, or the capex of other TNSPs, to be meaningful or appropriate.

- Transend does not support the Commission's proposal to undertake an ex-ante assessment of whether augmentation (and renewal) projects will pass the regulatory test.

- TNSPs should be prepared to justify any over-spend of the regulatory test augmentation amount.

- TNSPs may make a case for efficiency gains for any under-spend of the regulatory test augmentation amount.

---

5 OPERATING AND MAINTENANCE EXPENDITURE

5.1 The Commission's current approach

The Discussion Paper explains that the Commission currently uses a "combination of performance indicators" to assess a TNSP's efficient operating and maintenance expenditure requirements. The Discussion Paper explains that the Commission relies heavily on appointed consultants who undertake the following analysis:

- benchmarking the TNSPs' opex forecasts against other TNSPs both nationally and internationally
- conducting an assessment of the TNSPs' forecast opex costs for each year of the regulatory period and whether there is scope for additional efficiency gains
- reviewing the TNSPs' allocation of opex costs to specific activities i.e. the distinction between regulated and non-regulated activities
- assessing the efficiency of the TNSPs' operating practices and management systems.

The Discussion Paper explains further that:

> "As a means of achieving greater incentives the ACCC uses an efficiency carry-over. The efficiency carry-over mechanism rewards the TNSP with higher profits when the firm manages to lower its controllable costs." Discussion Paper, page 39.

The Discussion Paper questions whether the regulatory regime can be improved by providing stronger incentives for efficiency and investment with a more light-handed regulatory approach. It notes that a recent workshop on incentive regulation explored the greater use of external benchmarks, such as total factor productivity measures for setting the price and revenue cap parameters. The Commission considers that this may result in more efficient practice, as benchmarking breaks the nexus with the firm's actual costs and revenues.

The Commission summarises its position by stating that:

> "There are a number of implementation issues that need to be resolved and developed before the Commission could adopt such an approach. In the interim the Commission will stay with forecasting the firm's actual costs and using a carry-over mechanism that results in constant incentives and reveals the true costs of the TNSP over time." Discussion Paper, page 41.

5.2 Role of benchmarking

In Transend's view, the Discussion Paper provides a slightly confusing impression of the Commission's current practice and how it may change in the future. In particular, on the one hand the Discussion Paper makes reference to more light-handed regulatory approaches such as the use of total factor productivity. However, the Discussion Paper (page 41) asks interested parties to address the following questions:

- Should the Commission apply benchmarking to individual components of the total allowed revenue (such as operating expenditure)? In your view is benchmarking of opex feasible or sensible?
- What are the primary cost drivers of electricity transmission companies? Is it possible to develop a reasonably reliable cost model for Australian electricity transmission companies?

- Supposing the Commission is able to develop a reasonably reliable cost model for transmission companies, how should the Commission use the output of this model?

In Transend's view, the development of a cost model to determine "efficient O&M expenditure" is inconsistent with the concept and philosophy of an approach based on total factor productivity (TFP). This is because:

- TFP approaches are used to set a price path to reflect the regulated company's ability to deliver price reductions relative to the CPI. The approach is based on all factors of production, rather than adopting a partial factor approach – such as benchmarking operating expenditure

- Development of a cost model is unlikely to be "light-handed" as it will require a very detailed consideration of cost allocation issues, and an examination as to why actual costs differ from predicted costs. Whilst a TFP approach is not free from complexity, the concept is much more light-handed in that it only examines the ratio of outputs to inputs.

During its revenue review process, Transend repeatedly cautioned the Commission against the use of simplistic partial benchmarks, such as operating expenditure as a percentage of asset value. Transend noted in particular that these types of partial indicators make no allowance for economies of scale or customer density – both of which distort comparisons of partial indicators.

On the basis of its experience, Transend is very doubtful whether a robust benchmarking or cost model approach can or should be developed. It is particularly worrying that the Commission appears to consider this to be a "light-handed" approach. However, should the Commission wish to explore the application of benchmarks further, Transend would be happy to participate in an industry benchmarking group. Such a group could explore ways to collect information to make meaningful benchmarked comparisons between TNSPs, including appropriate recognition of economies of scale, different TNSP responsibilities and different operating environments.

5.3 Suggested approach to setting O&M

Transend does not consider that use of average past O&M expenditure allowances is a reasonable guide to future O&M allowances, unless activities for the TNSP have been relatively stable over that period and are forecast to remain stable. Transend notes that O&M expenditure associated with asset operation and maintenance is not stable over time, and may be influenced by a range of "lumpy" factors, including identification of new defects in the asset base, the age of the network and new legislative requirements.

Transend's recent experience has further shown that, where significant changes are occurring in a TNSP's operating environment, past expenditure levels are a poor and inappropriate guide to future requirements. In such environments, the most recent cost outturns are likely to provide better information than an average of the previous regulatory period.

Transend considers that an in-depth review of a TNSP's expenditure proposals by a suitably qualified consultant is most likely to provide a robust basis for the Commission's decision. Such analysis should appropriately recognise scope changes, underlying cost drivers and one-off "lumpy" opex costs associated with TNSP activities.

Transend notes that the Commission asks interested parties to comment on which of two methods they consider to be the most effective means of reducing costs (emphasis added):

- the Commission's current approach; or

- benchmarking.

In Transend's view, this question improperly characterises the current approach as not including benchmarking. As noted earlier, the Commission has in fact applied benchmarking analysis in its consideration of efficient operating expenditure, despite the shortcomings of this approach.

It is also worrying that the Commission appears to believe that the objective of the regulatory exercise is to reduce costs. There is an important difference between determining efficient O&M expenditure and simply reducing expenditure. This subtlety should not be ignored, especially in an environment where customers increasingly demand improvements in service delivery.

5.4 Efficiency carry-over mechanisms

Transend is concerned that the Discussion Paper over-emphasises the current role of the "efficiency carry-over mechanism" in determining future O&M expenditure allowances. In reality, the Commission has neither published nor implemented a properly defined efficiency carry-over mechanism. Instead, TNSPs have been required to make a claim for an "efficiency bonus" as part of their revenue application.

In the absence of a properly defined efficiency carry over mechanism, it is difficult for the Commission to claim that it is presently relying on its incentive properties to determine future O&M expenditure allowances. Transend's view is that the Commission should give further consideration to implementing an efficiency carry-over model as a matter of urgency. This issue is discussed further in section 7 of this paper.

5.5 Self insurance and pass-through events

The Commission identifies three mechanisms for managing risk:

1. taking out insurance cover
2. self-insuring against certain risks
3. establishing pass-through rules with the Commission so that the financial impact of designated events is met by customers.

The Commission considers that it is important that these three approaches to risk management are adequately scoped and defined to ensure there is no overlap between them. In the Commission's view:

- expenditure on insurance is a rational and prudent part of the TNSP's risk management strategy
- all insurance options should be open to TNSPs to ensure they acquire the most efficient insurance cover available (if appropriate)
- TNSPs' approaches to risk management may legitimately differ.

The Commission suggests that guidelines may be appropriate for self-insurance to provide confidence that self-insurance is being managed appropriately within the TNSP and that customers will not ultimately bear the cost of a self-insured event occurring. Some risks are to be excluded from self insurance – such as risk of key personnel leaving the business.

The Commission has also suggested some guidelines for pass-through rules, which describe the types of events that may be subject to pass-through.

Transend believes that the Commission's analysis of these issues is soundly based. The critical issue is that the cost of risk should be appropriately managed and shared between the TNSP and its customers. In Transend's view, TNSPs should not be seeking to make financial gain from insurance per se, but it is legitimate to provide TNSPs with incentives to manage risk efficiently.

The Commission is right to accept the principle that for some types of risk – self insurance or pass-through provides a better outcome for customers than seeking external insurance. It is appropriate for the Commission to develop and fine-tune guidelines in this area in the light of experience. It is also important for the Commission to recognise that where a self-insurance provision has not been made, either the insurance or pass through coverage must increase.

It should be noted that in contrast to self-insurance, a TNSP may seek an insurance allowance in its operating expenditure to smooth the impact of pass-through events. Under this approach, if the accumulated provisions are insufficient to cover the costs of a pass-through event, the shortfall is made up by an additional pass-through amount. Transend understands that the Commission adopted this approach in relation to the ElectraNet decision, although this approach is not described in the Discussion Paper.

5.6 Summary of Transend's proposals in relation to O&M expenditure

- Transend is very doubtful whether a robust benchmarking or cost model approach can or should be developed.
- Transend notes that development of a cost model for O&M expenditure is inconsistent with the concept of light handed regulation or total factor productivity approaches.
- An in-depth review of a TNSP's expenditure proposals by a suitably qualified consultant is most likely to provide a robust basis for the Commission's decision.
- The Commission's role is not to reduce O&M expenditure, but to set an allowance which reflects efficient levels of expenditure.
- The Discussion Paper over-emphasises the current role of the "efficiency carry-over mechanism" in determining future O&M expenditure allowances.
- The Commission should give further consideration to implementing an efficiency carry-over model as a matter of urgency.
- The Commission's approach to insurance issues is soundly based. However, it should include the option that a TNSP may seek an insurance allowance in its operating expenditure to smooth the impact of pass-through events.
- It is important that pass-through arrangements are formally codified in a revenue control formula.

6 INCENTIVE REGULATION

6.1 The Commission's approach

The Discussion Paper raises a number of issues relating to the design of the efficiency carry-over mechanism. The purpose of the efficiency carry-over mechanism is to:

- provide regulated companies with strong incentives to deliver efficiency gains; and
- thereby "reveal" the efficient costs to the regulator.

Once the efficient costs are revealed, the regulator can reflect this new information in setting the allowed operating expenditure in the next regulatory period. In theory, the efficiency carry-over mechanism is a sophisticated method of overcoming the information asymmetry that exists between the regulated company and the regulator.

The Discussion Paper states that the Commission's preferred position is that the incentive mechanism adopted should satisfy the following criteria:

1. The incentive mechanism should lead to incentives for cost-reducing effort on both opex and capex which are constant over time
2. The incentive mechanism should give rise to roughly equal incentives for cost reducing effort on operating expenditure and on capital (i.e., investment) expenditure
3. Provided the incentive mechanism satisfies the two criteria above, is sustainable, and ensures adequate incentives for maintaining service quality the incentive mechanism should yield the highest power of incentives for cost reduction.

The Commission canvasses a number of detailed questions in relation to the design of an efficiency carry-over mechanism:

6.2 Lessons from the ESC in Victoria

Transend notes that considerable work has been undertaken by the ESC in Victoria, and its predecessor the ORG, on the efficiency carry-over mechanism. It is important that the Commission builds on this work, rather than attempting to reinvent the wheel.

Key lessons from the ESC's model are:

- The incentive properties are not distorted (as suggested by the Commission) if next period benchmark costs are based on a single year of the current regulatory period
- Appropriate incentives are provided to deliver efficiency savings in each year of the regulatory period
- It is not necessary (as suggested by the Commission) for an efficiency carry-over mechanism in relation to capital expenditure to depend on adjustments to the RAB
- It is not practical to distinguish between management-induced efficiency gains and those that are the result of "windfalls"
- It is important to specify the details of the efficiency carry-over mechanism in advance so that companies can respond to the incentive properties

- It is necessary to consider scope changes in assessing efficiency improvements.

It is disappointing that the Discussion Paper adopts a "clean sheet" approach to the issue of the efficiency carry-over mechanism. This is despite the claims made earlier in the Discussion Paper that:

> "As a means of achieving greater incentives the ACCC uses an efficiency carry-over. The efficiency carry-over mechanism rewards the TNSP with higher profits when the firm manages to lower its controllable costs." Discussion Paper, page 39.

Whilst care needs to be taken in applying a distribution network efficiency carry-over model to transmission networks (which have more lumpy investment profiles), the ESC's model is nevertheless a useful starting point for the Commission.

Transend is also concerned that, in establishing Transend's present revenue cap, the Commission on the one hand seems to want to apply a clawback approach to all "within period" capital expenditure efficiencies, and on the other hand is contemplating an efficiency carry-over mechanism for capital expenditure. These two positions are incompatible with one another. In Transend's view, this demonstrates that the basic elements of the Commission's regulatory framework are still uncertain. At this stage of the regulatory process – some four years after the draft SoRP was published – this is a serious concern.

6.3 Summary of Transend's proposals in relation to incentive regulation

- The Commission should build on the work already completed by the ESC in Victoria in developing an efficiency carry-over model, taking account of the differences between distributors and TNSPs.

- The Commission should seriously consider whether efficiency carry-over mechanism for capital expenditure is compatible with its (apparent) view that clawback should apply to "within period" capital expenditure efficiencies.

- As noted earlier, Transend's view is that clawback of all capital expenditure efficiencies is inconsistent with an incentive based regulatory regime, as mandated by the Code.

7 BENCHMARKING

7.1 Issues raised by the Discussion Paper

This chapter of the Discussion Paper introduces the notion that regulated revenue may be set by reference to an econometric cost model. Later in the chapter, the Discussion Paper canvasses the idea that the benchmarking might only relate to operating and maintenance expenditure. This latter issue has also been raised in chapter 5 of the Discussion Paper.

The Discussion Paper argues that the Commission may be required to set regulated revenue at a level which is almost certain to compensate the regulated company adequately. As a consequence, the Discussion Paper suggests that this approach will lead to some regulated companies being overcompensated. An alternative approach is to run the risk that regulated revenue will be inadequate in some instances.

To address this latter risk, one approach canvassed by the Discussion Paper is that TNSPs should be able to choose from a "menu" of regulatory options. This allows the TNSP to self-select a regulatory approach. The Discussion Paper explains:

> "In particular, the regulator can ensure that the regulated firm does not go under- compensated by allowing the regulated firm the *option* of choosing a low-powered incentive scheme (such as rate of return regulation) if it wishes." Discussion Paper, page 65

7.2 Transend's comments

Transend notes that the introduction of these benchmarking issues towards the end of the Discussion Paper is curious given the implications of the suggested approach for the earlier chapters. In particular, a cost model approach has implications for the Commission's "building block" method of setting revenue. If the Commission is contemplating such a radical departure in terms of approach, Transend would have expected this to be the subject of a separate paper.

As noted earlier, Transend is doubtful whether a benchmarking or cost model approach can replace substantial parts of the existing regulatory framework. Instead, such models are likely to inform the Commission's decisions on appropriate revenue requirements. Transend would caution, however, that the significant operational differences that exist between TNSPs are extremely difficult to resolve within a cost model.

Transend also notes that the Discussion Paper's reference to "high-powered" incentive regimes is somewhat at odds with the Commission's apparent adoption of clawback with respect to capital expenditure. Transend's view is that the Discussion Paper raises some very basic questions, if not contradictions, as to how the TNSPs ought to be regulated. Whilst it is always worthwhile to "go back to basics" in considering these matters, it is worrying that the Commission does not appear to have formed consistent views on these issues at this stage.

It is also concerning to see that the Commission is contemplating a "menu of regulatory options" whereby a TNSP can opt for rate of return regulation to avoid being under-compensated. The Code stipulates that the Commission must provide TNSPs with "a fair and reasonable risk-adjusted cash flow rate of return" (clause 6.2.3(d)(4)) and "with incentives and reasonable opportunities to increase efficiency (clause 6.2.3(d)(1)). In Transend's view, rate of return regulation in order to avoid under-compensation is contrary to both these Code provisions.

7.3 Summary of Transend's proposals in relation to benchmarking

- Transend would caution that the significant operational differences that exist between TNSPs are extremely difficult to resolve within a cost model.
- Transend would have expected such fundamental issues of regulatory approach to be raised in a separate paper.
- Transend notes that the approach raised in this chapter would have implications for the earlier parts of the Discussion Paper.
- There appears to be an inconsistency in raising the notion of "high powered" incentive regimes when the Commission appears to apply clawback in respect of all capital expenditure.
- Transend doubts whether a "menu" approach to regulation is consistent with the Code requirements.

8 WACC

8.1 The Commission's approach

The Discussion Paper outlines the Commission's preferred position on the key WACC parameters as follows:

- The term to maturity of the risk free rate should match the duration of the regulatory period.
- The Market Risk Premium should remain unchanged at 6%.
- Greater reliance should be placed on current market data in estimating the equity beta.
- The cost of debt should be estimated with reference to a proxy credit rating of A.

The Commission's preferred position (and the analysis provided in the Discussion Paper to substantiate it) are essentially the same as that set out in its Draft Decision on Transend's revenue cap.

Transend's response to the Draft Decision noted the company's view that in its assessment of the WACC, the Commission appeared to have given insufficient attention to the guiding principles articulated by the Productivity Commission in its recent review of the national access arrangements.

As noted in our response to the Draft Decision, the Productivity Commission has carefully examined the views expressed by a range of different stakeholders on the decisions to date of Australia's economic regulators. Throughout the course of its review, the Productivity Commission urged regulators not to be overly ambitious or precise in their efforts to remove perceived "monopoly rents" from the income streams of regulated businesses. The Productivity Commission noted that this principle is clearly in the public interest - notwithstanding the obvious interest of consumers in obtaining monopoly services at the lowest possible price - given that:

- there is a significant risk that aggressive regulatory decision-making may severely diminish incentives for on-going investment in infrastructure
- the cost to society as a whole of insufficient infrastructure investment is far greater than the potential cost associated with regulatory decisions that are expressly aimed at providing incentives for on-going investment
- the information that is available to regulators in their decision-making is, unavoidably, characterised by a high degree of uncertainty
- given this uncertainty, and the potential costs to society of overly aggressive regulatory decisions, there is a strong case for regulators' decisions to err in favour of encouraging more, rather than less infrastructure investment.

These key themes were endorsed by the Commonwealth Government in its interim response of September 2002 to the Productivity Commission's Final Report. For instance, in response to Recommendation 6.3 of the Productivity Commission's Final Report, the Government states:

> "The Government agrees that statutory pricing principles should be established in relation to Part IIIA [of the Trade Practices Act]. Pricing principles will provide guidance for pricing

decisions and contribute to consistent and transparent regulatory outcomes over time. They will also help to provide certainty for investors and access seekers alike and facilitate commercial negotiations between parties.

Decision-makers will be required to have regard to the pricing principles, rather than requiring each and every principle to be satisfied. Some slight modifications to the Commission's recommendations are proposed. These modifications are designed to provide general guidance about the approach to be taken by decision-makers, focussing on efficiency and investment considerations, which are consistent with the Government's proposed objects clause for Part IIIA and existing pricing principles under certified access codes.

The Government agrees to include the following pricing principles in Part IIIA.

> 'The Australian Competition and Consumer Commission (ACCC) must have regard to the following principles:
>
> (a) that regulated access prices should:
>
> (i) be set so as to generate expected revenue for a regulated service or services that is at least sufficient to meet the efficient costs of providing access to the regulated service or services; and
>
> (ii) include a return on investment commensurate with the regulatory and commercial risks involved…' "

Transend considers that the Government's response to the Productivity Commission's Final Report, and to Recommendation 6.3 in particular, is significant, for a number of reasons:

- Firstly, the Government's response confirms that the views expressed by the Productivity Commission throughout its review of the national access regime accord very closely with Government policy.

- Secondly, the Government's response confirms an intention to codify a principle requiring access prices to be set so as to generate expected revenue for a regulated service that is ***at least*** sufficient to meet the efficient costs of providing the regulated service. This principle contrasts sharply with the one that has been adopted by the Commission to date, that regulated revenues should be set at a level that is ***just sufficient*** to ensure continued service provision.

- Thirdly, it is significant that the Government's response confirms an intention to codify a pricing principle requiring access prices to include a return on investment commensurate with the ***regulatory*** and ***commercial*** risks involved. Transend interprets this as an indication of the Government's acceptance of the proposition that regulators' estimates of WACC have generally not been sufficiently high to include appropriate compensation for all the risks borne by investors under the Australian regulatory regime.

It is a matter of disappointment and concern that Discussion Paper contains no consideration by the Commission of the recommendations of the Productivity Commission, and the Government's response. Transend urges the Commission to carefully consider these matters, and give effect to the principles articulated by the Productivity Commission in the formulation of its Statement of Regulatory Principles.

8.2 The risk of further variations in the allowed cost of capital

As noted in further detail in sections 9.3 and 9.4 below (and in other submissions made by Transend in the course of its present revenue cap determination) Transend considers that the

Commission's preferred position leads to an estimate of the WACC that is unduly biased toward providing a lower, rather than a higher rate of return. For the reasons identified by the Productivity Commission - and accepted by the Commonwealth Government - this is clearly not in the public interest.

It is therefore a matter of additional concern that the Commission's Discussion Paper foreshadows the possibility of further reductions in the WACC at future revenue determinations.

The Commission's preferred position appears to be one of seeking to reduce the WACC at each revenue review to the lowest possible level that can be justified. Transend considers that it is very important for the Commission to assess an appropriate WACC – in accordance with the principles articulated by the Productivity Commission – having regard to the following fundamental considerations:

- Firstly, any estimate of the WACC must necessarily be based on data that is subject to a large degree of statistical uncertainty. Any point estimate of the WACC made by a regulator for the purpose of capping a TNSP's revenue ultimately involves subjectivity and judgement. In this regard, it is noted that page 81 of the Discussion Paper states:

  > "Despite this preference [of relying on market data to estimate beta], the Commission recognises that there are issues associated with implementing such an approach. For instance, the availability of a limited data set may have implications for a rigorous estimation procedure which incorporate market based measures."

- Secondly, as recognised by the Commission itself, there are potentially substantial costs associated with setting a WACC that is inappropriately low. For instance, page 81 of the Discussion Paper states:

  > "In determining past revenue caps for TNSPs, the Commission has sought not deter new investment and has been biased towards the TNSP".

  While Transend does not accept that the Commission's decisions have been unduly biased in favour of TNSPs, it welcomes the Commission's acknowledgment of the need for regulators to carefully consider the implications for investment incentives of their decisions.[1]

- Finally, regulatory decision-making should explicitly recognise that the life cycles of most transmission assets will extend across as many as ten or more 5-year regulatory periods. Expectations held by investors ***today*** about the likely WACC ***over the life of the asset*** - not simply the most recent WACC allowed by the Commission for a five year period - will determine the strength of investment incentives ***today*** and into the future.

The Commission's present approach (of foreshadowing the possibility of further reductions in the WACC) poses a real threat to investment incentives today, and gives customers the worst of all worlds: the creation of expectations of reduced returns dampens investment incentives today, without delivering any reduction in prices to customers today.

Given these important considerations, Transend believes that through the SoRP, the Commission should seek to provide as much certainty as possible as to the level of WACC businesses can reasonably expect ***over the life*** of new investments.

---

[1] As noted in Section 9.1 above, Transend urges the Commission to provide a detailed account of its consideration of this important issue – in light of the recommendations of the Productivity Commission's review of the national access regime – in its SoRP.

8.3 International comparisons

Some stakeholders (including the Commission itself) have described Australian regulators' WACC estimates as comparing very favourably to those of overseas regulators. This issue is the subject of a detailed paper published in September by NECG. A recent article (written by Henry Ergas, Managing Director of NECG) provides an overview of NECG's research:[2]

> "Faced with mounting criticisms of low returns, the Australian Competition and Consumer Commission argues the returns it allows regulated utilities are "generous" compared with those overseas. But a recent survey my colleagues and I have conducted of more than 100 regulatory decisions shows that this is not true.
>
> The survey, *International Comparison of Weighted Average Cost of Capital Decisions* (a submission to the Productivity Commission Review of the Gas Access Regime), shows regulated rates of return in the United States are substantially more generous to investors than those in Australia - and this is despite more than a century of regulation in the US. Similarly, returns in the UK, while superficially comparable to those in Australia, are significantly higher once differences in market risk are taken into account.
>
> In the US telecommunications sector, tariffs for interstate service are referenced from the Federal Communications Commission's cost of capital benchmark of 11.25 per cent, which is 6 per cent above long-term US bond rates.
>
> In the UK, the telecommunications regulator, Oftel, determined that BT required a cost of capital 5 per cent above the risk-free rate for its network operations.
>
> By contrast, the increment applied by the ACCC on Telstra's Public Switched Telephone Network in its last decision in 2000 was 2.65 per cent. The real difference is even greater because investors generally require greater returns in Australia than the US and UK because of higher market risk.
>
> In the electricity transmission sector, the ACCC argues that returns less than 3 per cent above the long-term bond rate are appropriate for Australian businesses.
>
> In the US, despite electricity companies receiving returns about 5 per cent above the long-term bond rate, the Federal Energy Regulatory Commission is providing further increments on the cost of capital for firms to engage in behaviour to promote investment."

A paper produced in November by NECG on behalf of the electricity TNSPs[3] also sets out this analysis, and concludes that for electricity transmission, it is ***not*** the case that regulated rates of return in Australia compare favourably to those provided by overseas regulators, if factors such as market risk and different values of the risk free rate are taken into account.

Transend considers that there is a clear need for the Commission to carefully and objectively assess and respond to this analysis in the course of formulating its SoRP.

---

2 *Australian Financial Review*, 23 September 2003.

3 NECG, 2003 Review of the Draft Statement of Principles for the Regulation of Transmission Revenues: Submission to the ACCC for the Electricity TNSPs from Network Economics Consulting Group, November 2003.

8.4 Comments on WACC parameters

Transend, along with the other TNSPs, commissioned two independent experts to provide detailed advice in relation to the preferred positions on WACC set out in the Commission's Discussion Paper. That advice is detailed in the papers listed below, which form an integral part of Transend's submission to the Commission:

- NECG, *2003 Review of the Draft Statement of Principles for the Regulation of Transmission Revenues: Submission to the ACCC for the Electricity TNSPs from Network Economics Consulting Group*, November 2003.

- NERA, *Drawing a line-in-the-sand for the regulatory WACC,* November 2003

- NERA, *Evaluation of the ACCC's proposed approach to statistical estimation of equity betas for TNSPs*, November 2003

NECG's report points out that the decision of many overseas investors to exit the Australian infrastructure sector highlights the importance of regulatory cost of capital determinations to the continuing challenge of attracting investment to this sector in highly competitive global capital markets. If WACC allowances are provided to regulated businesses in Australia that are lower than returns that can be earned elsewhere for an equivalent risk, investment will not be forthcoming, with the impact ultimately borne by consumers through congestion and lower service quality.

NECG and NERA present detailed analysis to demonstrate that a number of proposed positions in the Commission's Discussion Paper will understate the required returns to investors, and therefore will not provide appropriate incentives for efficient investment. Their analyses and critiques of the Commission's preferred positions on the key WACC parameters is summarised below.

8.4.1 Maturity of the risk free rate

NECG believes the Commission is wrong to base the maturity of the risk free rate in the cost of debt and equity of the WACC on the length of the regulatory period. In addition to the potential incompatibility of the approach with efficient debt management, the Commission's proposed approach ignores the reality that recontracting risk can only be removed if the Commission were to credibly commit to providing the regulated firm its actual cost of debt – a position that is counter to the Commission's proposed benchmarking approach to debt and one that cannot be delivered in an ex ante regulatory environment where debt may need to be raised over the course of a regulatory period. In the case of equity, NECG sees no rationale for aligning bond maturity with the regulatory period. In both cases, the appropriate approach is to base the bond maturity on the life of the asset, with the longest-dated bond, namely the 10-year Commonwealth bond providing the best available proxy.

8.4.2 Beta

NECG recognises the Commission's attempts to address the imprecision of beta estimation by estimating beta as an upper confidence interval (without stating the level of confidence it would require) from a sample of listed comparators. However, the Commission's approach is flawed and will create significant regulatory uncertainty for a number of reasons:

- Firstly, the beta estimates that the Commission relies upon have poor statistical properties.

- Secondly, even if this problem could be overcome, the approach of pooling estimates is open to gaming and abuse by both regulated entities and the regulator alike.

- Finally, even if a mechanistic formula can be determined, the choice of the appropriate level of confidence to apply is inevitably ad hoc.

Given the inherent need for judgement in determining a beta, relying on such a mechanistic approach alone is dangerous and will introduce a false sense of confidence. Therefore, NECG recommends that the Commission consider a number of alternative sources for beta, including international beta values and first principles.

It is noted that the Commission has repeatedly justified its position on asset beta by reference to the fact that such a value generates an equity beta of 1 reflecting the average risk of the market as a whole. However, this statement is misleading as it does not take into account the average gearing of the market, which is significantly lower than the Commission's assumed benchmark gearing for TNSPs. Indeed, NECG's estimates suggest that an average asset beta of listed firms on the Australian Stock Exchange is around 0.64 – significantly higher than the benchmark allowances for TNSPs.

It is noted that in its response to the Commission's recent Draft Decision on the Tasmanian Transmission Network Revenue Cap, Transend cited analysis contained in a paper produced by the Victorian Office of the Regulator-General in May 1998. That paper (titled *Staff Paper Number 1: Weighted Average Cost of Capital for Revenue Determination - Gas Distribution*) found that:

- the average level of gearing employed by a sample of 47 of Australia's top 100 listed companies was around 33% debt to total assets;
- the average asset beta for the sample was around 0.7; and
- applying a gearing assumption of 60% debt to total assets to the sample produced an estimated equity beta of around 1.6.

The conclusions of the analysis completed more recently by NECG are consistent with those of the Victorian regulator's 1998 work. Both sets of analyses demonstrate clearly that a TNSP equity beta of 1.0 (at an assumed gearing of 60% debt to total assets) represents a level of systematic risk that is ***materially below*** the average level of systematic risk of the market, taking into account the average level of gearing employed in the market. Therefore, if the Commission does in fact intend to apply an estimate of the TNSP equity beta which reflects the average risk of the market, then a value ***well in excess*** of 1.0 would have to be adopted[4], given the benchmark gearing assumption of 60%. It is noted that this is one of a number of considerations advanced by Transend in its recent revenue cap application and response to the Commission's Draft Decision, to substantiate the application of an equity beta of 1.12.

Finally, NERA's report notes that there are two partially offsetting errors in the Commission's calculation of the 95% confidence interval for the equity beta. The combined effect of correcting for these errors is that the calculated 95% upper bound for the equity beta falls between 1.3 and 0.8 – with an average of 1.0. That is, based on the data presented by the Commission, its preferred approach of setting a 95% confidence interval would not deliver, on average, a value for beta different from the value it has traditionally set.

---

4 Indeed, as noted above, analysis published by the Victorian Office of the Regulator-General in 1998 indicated that under the average gearing levels prevailing at that time, an equity beta of around 1.6 for a gearing level of 60% debt to total assets would reflect the average systematic risk of the market.

On this basis, Transend suggests that the SoRP should confirm the Commission's on-going intention to adopt a beta of 1.0

8.4.3 Benchmark credit rating and cost of debt

NECG believes the Commission's approach to determining a benchmark credit rating unnecessarily penalises efficient electricity transmission businesses and violates principles of competitive neutrality. The Commission should not react to a lack of suitable comparators by including the credit rating of Government owned electricity distribution business, the ratings of which may have little or no relevance to a stand-alone TNSP. By doing so, the Commission is systematically biasing upwards the benchmark credit rating, and consequently biasing downwards the required debt margin. In the absence of appropriate data on comparable companies, the Commission should consider what an efficient credit rating for the firm in question would be, through considering a number of means such as cash flow modelling and seeking the advice of private rating agencies.

8.4.4 Market risk premium

In the Discussion Paper the Commission supports adoption of a value of 6.0% for the Market Risk Premium (MRP).

Although this value is consistent with regulatory precedent in Australia, longer-term historical data and benchmarking approaches to MRP suggest that a MRP of 7% is more appropriate.[5]

The historical range for the MRP reported in empirical studies, and favoured by finance professionals has been 6.0 to 8.0%. This range represents the collective wisdom of over 100 years of market evidence in Australia. While a number of arguments have been advanced to suggest that a figure at the low end of this range may be appropriate, these arguments are not supported theoretically nor are they supported by empirical evidence.

As a result, there is not a strong case for using a figure at the low end of the range. As noted by the Productivity Commission, the consequences of setting too low an MRP (and WACC) in the form of insufficient investment are greater than those of setting too high a WACC.

This suggests that there is a strong public interest argument in favour of adopting a higher MRP than has been customary in Australian regulatory decision making in recent years. Given that any estimate of MRP is a matter of judgement, the asymmetric consequences of regulatory intervention favour choosing a rate that is tilted to overestimating the MRP rather than under estimating it. Accordingly, a forward-looking MRP of at least 7% should be applied.

8.5 Summary of Transend's proposals in relation to WACC

- The Commission should carefully consider the recommendations of the Productivity Commission – and the Commonwealth Government's response to those recommendations - in the formulation of its Statement of Regulatory Principles. The SoRP should clearly demonstrate the Commission's commitment to giving effect to the principles articulated by the Productivity Commission, and accepted by the Government.

- The Commission should cease to foreshadow the possibility of reductions in the WACC, as such conduct damages investment incentives and has the potential to lead to increased costs to consumers. The Commission should, through the SoRP, seek to provide as much certainty as

---

5 The issue of the Market Risk Premium has been covered extensively in revenue cap submissions lodged recently by Transend and other TNSPs.

possible as to the level of WACC businesses can reasonably expect over the life of new investments.

- The Commission should carefully and objectively assess and respond to NECG's analysis of international rates of return in the course of formulating its SoRP.

- The Commission should adopt the longest-dated bond, namely the 10-year Commonwealth bond as the best available proxy for the risk free rate.

- The SoRP should confirm the Commission's on-going intention to continue to adopt a beta of 1.0, on the basis that such an approach is consistent with market data and intuition, and such an approach is appropriate, given:

  - the high degree of statistical uncertainty and paucity of data;

  - the high degree of subjectivity involved in estimating beta, and

  - the costs associated with regulatory error.

- The Commission should avoid using the credit ratings of Government-owned utilities as benchmarks because such an approach violates principles of competitive neutrality, and unduly penalises efficient TNSPs. The Commission should instead estimate an efficient credit rating for the firm in question, based on cash flow modelling and the advice of rating agencies.

  - The Commission should adopt an estimate of the Market Risk Premium that is consistent with the empirical evidence, on the basis that this approach is consistent with practice in the capital markets and statistically more robust than any other approach.