Decision

Statement of principles for the regulation of electricity transmission revenues

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Contents

Glossary

AARR	aggregate annual revenue requirement
AC	alternating current
ACCC	Australian Competition and Consumer Commission
ACG	Allen Consulting Group
AER	Australian Energy Regulator
capex	capital expenditure
CAPM	capital asset pricing model
COAG	Council of Australian Governments
code	National Electricity Code
CPI	consumer price index
DC	direct current
discussion paper	discussion paper—*2003 Review of draft statement of principles for the regulation of transmission revenues*
DORC	depreciated optimised replacement cost
draft SRP	*Draft statement of principles for the regulation of electricity transmission revenues* (August 2004)
DRP	*Draft statement of principles for the regulation of transmission revenue* (May 1999)
ECCSA	Electricity Consumers Coalition of SA
ENA	Energy Networks Association
ESC	Essential Services Commission (Victoria)
ESIPC	Electricity Supply Industry Planning Council
EUAA	Energy Users Association of Australia
gas code	National Third Party Access Code for Natural Gas Pipeline Systems
GW	gigawatt

IC	Industry Commission
IPART	Independent Pricing and Regulatory Tribunal of New South Wales
KV	kilovolt
MAR	maximum allowed revenue
MRP	market risk premium
NECA	National Electricity Code Administrator Ltd
NECG	Network Economics Consulting Group Pty Ltd
NEM	National Electricity Market
NEMMCO	National Electricity Market Management Company
NERA	National Economic Research Association
NPV	net present value
ODRC	optimised depreciated replacement cost
Ofgem	Office of Gas and Electricity Markets (UK)
Ofwat	Office of Water Services (UK)
opex	operating and maintenance expenditure
ORG	Office of the Regulator-General (Victoria)
RAB	regulated asset base
SRP	*Statement of principles for the regulation of electricity transmission revenues*
supplementary discussion paper	supplementary discussion paper—*Review of the draft statement of principles for the regulation of transmission revenues: capital expenditure framework*
TNSP	transmission network service provider
TUOS	transmission use of system
VENCorp	The Victorian Energy Networks Corporation
WACC	weighted average cost of capital

1 Introduction

1.1 Background

Under the National Electricity Code (code), the Australian Competition and Consumer Commission (ACCC) is responsible for regulating transmission revenue in the National Electricity Market (NEM).

The code envisaged that the ACCC would publish a *Statement of regulatory intent* to establish guidelines as to how the ACCC would perform its regulatory functions. Accordingly, in May 1999, the ACCC released its *Draft statement of principles for the regulation of transmission revenue* (DRP). The DRP set out the ACCC's intended approach to setting CPI–X revenue caps for regulated electricity transmission network service providers (TNSPs).

The ACCC has now completed all first round revenue cap decisions. The ACCC considered it appropriate to review the principles in light of this experience so that it can apply the revised principles to second round revenue cap decisions.

The process of reviewing the DRP has involved the following key steps:

- In August 2003 the ACCC released a discussion paper outlining the key issues for review in the DRP
- In March 2004 the ACCC released a supplementary discussion paper on the capital expenditure (capex) framework
- In April 2004 the ACCC held a public forum which discussed the key issues for review
- In August 2004 the ACCC released for public comment the *Draft statement of principles for the regulation of electricity transmission revenues* (draft SRP).

Following a further period of consultation, the ACCC has now released the *Statement of principles for the regulation of electricity transmission revenues* (SRP). The SRP comprises a background paper and a consolidated version of the principles.

1.2 Purpose

The SRP sets out the ACCC's general approach to setting revenue caps to apply to transmission network owners and TNSPs under clause 6.2.4 of the code.

1.3 Application

The SRP does not form part of the code and is not an instrument made pursuant to the code. Accordingly, the application of the SRP to a particular TNSP will depend on the individual circumstances of the case. The ACCC will depart from the SRP where required or justified by the code provisions.

The approach set out in the SRP will continue to evolve in response to factors such as code amendments, changes in the industry, and improvements in regulatory models and best practice worldwide.

1.4 Transition to SRP

TNSPs that submit a revenue cap application after the release of the SRP should refer to the SRP rather than the DRP. However, where the relevant TNSP is subject to a revenue cap set before the release of the SRP, the following transitional arrangements apply:

- the approach outlined in chapter 5 of this SRP in relation to capex would only apply for future revenue cap decisions. The valuation of past capex for the purpose of the next revenue cap reset for that TNSP would be guided by chapter 5 of the DRP and appendix B of the SRP.

- the approach outlined in chapter 6 of this SRP in relation to opex would only apply for future revenue cap decisions. The treatment of past opex for the purpose of the next revenue cap reset for that TNSP would be guided by chapter 7 of the DRP.

1.5 Related guidelines

Since releasing the DRP, the ACCC has also issued the following documents:

- Information requirements guidelines (5 June 2002)

- Transmission ring-fencing guidelines (15 August 2002) and Reporting guidelines (23 October 2002)

- Service standards guidelines (12 November 2003)

- Guidelines for the negotiation of discounted transmission charges (3 May 2002)

- Review of the regulatory test for network augmentations (11 August 2004)

The ACCC intends to release a compendium of each of these guidelines including the SRP by early 2005. The documents will be available at http://www.accc.gov.au.

1.6 Structure of SRP

The ACCC's general approach to setting revenue caps is explained in the following chapters:

Chapter 2 Regulatory framework

Chapter 3 Revenue cap decision making process

Chapter 4 Asset base

Chapter 5 Incentive framework for capital expenditure

2 Regulatory framework

2.1 Introduction

This section describes the broad framework that will be used by the ACCC for regulating transmission revenues.

2.2 Form of regulation

Clause 6.2.4(a) of the code provides that economic regulation is to be of the CPI–X form or some incentive based variant. In applying this form of regulation, clause 6.2.4(b) requires the ACCC to set a revenue cap to apply to each TNSP for a regulatory period of at least five years. In setting the maximum allowable revenue for the regulatory period, the ACCC makes use of the building block model.

2.3 Building block approach

The building block approach is used to ensure that the expenditure of each TNSP is appropriately amortised over time to ensure that each TNSP, given efficient expenditure practices and decisions, is adequately compensated for the cost of providing the transmission services to customers in the long run.

The building block model consists of two equations which are known as the revenue equation and the asset base roll forward equation. These two equations are used to determine an allowed stream of revenues for each TNSP for as long as it remains regulated. Ignoring any incentive rewards or penalties, these equations together ensure that the present value of the allowed revenue stream is equal to the present value of the expenditure stream of the regulated firm.

Expressed in the simplest form, the building block equations are as follows:

MAR = *return on capital + return of capital + opex + tax*

= *(WACC * RAB) + D + opex + tax*

and

new RAB = *previous RAB – depreciation + capex*

where:

MAR = *maximum allowable revenue*

WACC = *post tax nominal weighted average cost of capital*

RAB = *regulatory asset base*

D = *depreciation*

opex = *operating and maintenance expenditure*

tax = *expected business income tax payable*

A description of each of these cost components is outlined below:

regulatory asset base (RAB)	The RAB is a stock of funds which reflects the total amount (in present value terms) which must be returned to investors in the future to compensate them for investments made in the past
cost of capital (WACC)	The cost of capital is the rate of return required by investors to induce them to commit funds to the TNSP. The required rate of return will depend on the riskiness of the returns of the TNSP relative to other risky assets and the return on risk free assets. TNSPs are funded using a combination of debt and equity. The rate of return required by investors to induce them to purchase the debt and equity of the TNSP will be different, reflecting the different risks of these two financial instruments. The required rate of return for the firm as a whole (also known as the cost of capital) is the weighted average of the required rate of return on debt and equity and is referred to as the weighted average cost of capital (WACC).
depreciation (return of capital)	Depreciation is a flow of funds which returns to investors the 'capital' component of the funds they commit to the TNSP (as distinct from the return on that capital). The total amount of depreciation of the firm must be equal to its total stock of capital expenditure over the life of the firm.
operating and maintenance expenditure (opex)	The expenditures of the TNSP which are not amortised over time (i.e. which are recovered in revenue in the year in which they are incurred).
capital expenditure (capex)	The expenditures of the TNSP which are amortised over time (i.e. which are added to the RAB, earn a return on capital as long as they are in the RAB and which are recovered over time through the depreciation stream).
tax liabilities	In the 'post tax' framework, the firm's tax liabilities are treated as a separate expenditure item.

2.4 Incentive regulation

An objective of the regulatory regime is to foster efficient investment and operating practices within the transmission sector, and to provide for an equitable allocation between TNSPs and users of expected efficiency gains.

The efficiency incentives are incorporated in the building block model through service standards, opex and capex incentive schemes. This can be expressed in a more precise version of the building block model equations as follows:

$$\textit{forecast revenue} = \textit{return on capital} + \textit{return of capital} + \textit{opex} + \textit{tax} + \textit{service standards incentive scheme} + \textit{opex incentive scheme}$$

$$\textit{closing } RAB_{t-1} = \textit{opening } RAB_{t-1} + \textit{actual } capex_{t-1} - \textit{depreciation allowance}_{t-1} + \textit{capex incentive scheme}$$

Service standards incentive scheme

In addition to the statutory reliability requirements in each participating jurisdiction, the incentive to improve service standards is provided by the service standards scheme set out in the ACCC's *Service standards guidelines* (12 November 2003).

Opex incentive scheme

The incentive to increase the efficiency of operating and maintenance practices is provided by:

(a) allowing the TNSP to retain, during a regulatory period, the difference between its actual opex and the forecast costs used to set the revenue cap

(b) the mechanism by which the ACCC takes into account past expenditure out turns when setting future expenditure targets

(c) the carry forward mechanism.

Capex incentive scheme

The incentive to reduce capital expenditure is provided by allowing the TNSP to retain, during the regulatory period, the difference between forecast and actual return on capital and depreciation for the component of the RAB that relates to forecast capex.

2.5 Certainty and consistency

An objective of the regulatory regime is to provide certainty and consistency for TNSP's and users. This is provided by not periodically revaluing the asset base which can lead to unpredictable revenues and prices. The ACCC will now roll forward the value of sunk assets at their depreciated historic cost, taking account of inflation. Further, the ACCC has decided to move to a regulatory incentive for capital expenditure based on the determination of investment targets, before expenditure is incurred. This provides TNSP's with certainty on its revenue allowance over the life of the asset.

3 Revenue cap decision making process

3.1 Introduction

This section describes the process and timetable that the ACCC intends to follow when setting or resetting a revenue cap under clause 6.2.4(b) of the code. The process and timetable may be adjusted by the ACCC where the process is not prescribed by the code and an adjustment is justified.

3.2 Submission of application

The TNSP must submit a revenue cap application by 1 April of the penultimate year of the regulatory period.

The application must comply with the information requirements set out in the *Information requirements guidelines* and should also contain the information set out in appendix A of the SRP.

Within four weeks of receipt:

- the ACCC will review the application for compliance with the *Information requirements guidelines* and appendix A of the SRP.
- the ACCC will review any accompanying requests that all or part of the application remain confidential
- if the ACCC is not satisfied with the information provided, the ACCC will provide a written notice to the TNSP
- the TNSP must resubmit the application addressing the issues outlined in the notice.

As TNSPs are required to publish their transmission prices by 15 May, it is important that any issues concerning the application be resolved within this four week period. If an issue is not resolved expeditiously, the ACCC may need to consider using its compulsory powers under clauses 6.2.5 and 6.2.6, or basing its revenue cap decision on assumptions drawn by the ACCC.

3.3 Public consultation process

The ACCC will notify interested parties of the application and will:

- describe the TNSP to which the application relates
- state how copies of the non confidential parts of the application may be obtained
- request submissions by a date specified in the notice.

The commencement of the ACCC's assessment of the application will be effective from the date of publication of the notice.

3.4 Submissions

The ACCC will call for submissions on the application to be submitted within six weeks from the publication of the notice. Submissions on any consultant's reports must be provided six weeks after publication of the consultants' reports.

If a party wishes to provide a submission after the closing date, the party must notify the ACCC before the closing date. The notification must set out:

- the date by which the party proposes to provide the submission
- the key arguments or issues to be addressed in the submission
- the reason for the lateness
- the detriment if the ACCC does not consider the submission.

The party will then be advised as to whether the ACCC will consider the submission.

3.5 Confidentiality

All submissions and other documents relevant to the decision making process (except those containing information provided by a TNSP under clause 6.2.5 of the code) will be treated as public documents and placed on the public register unless otherwise requested. If a party wishes to claim confidentiality with respect to all or part of a document, the party must:

- clearly identify the information that is the subject of the confidentiality claim
- where only part of a document is confidential, provide a non- confidential version of the document for the ACCC's public register. This version must clearly indicate where information has been deleted due to confidentiality
- set out the reasons in support of the confidentiality claim.

The request for confidentiality will be assessed by the ACCC. If the request is not accepted, the document (or relevant part of the document) will be returned to the party and will not be taken into account by the ACCC.

Where the document (such as the revenue cap application) contains information provided by a TNSP pursuant to clause 6.2.5, the TNSP should:

- clearly identify the information that is provided pursuant to clause 6.2.5
- indicate whether the TNSP consents to the disclosure of that information
- if consent is not granted, provide reasons as to why disclosure is refused (to assist the ACCC in deciding whether to issue a written notice under clause 6.2.6(c))

- if consent is not granted in relation to part of a document, provide a non-confidential version of the document for the ACCC's public register. This version should clearly indicate where information has been deleted due to confidentiality.

If consent is not granted, the ACCC will review the refusal and decide whether to follow the procedure set out in clause 6.2.6.

3.6 Assessment of the application and draft decision

The ACCC will assess the application against the relevant code provisions including clauses 6.2.2, 6.2.3 and 6.2.4.

In accordance with clause 6.2.6(a), the ACCC will publish full and reasonable details of the basis and rationale for the proposed decision, including but not limited to:

- reasonable details of qualitative and quantitative methodologies applied including any calculations and formulae

- the values adopted for each of the input variables in any calculations and formulae, including a full description of the rationale for adoption of those values

- reasonable details of other assumptions made in the conduct of all material qualitative and quantitative analyses undertaken in relation to the setting of a revenue cap or related matter

- full reasons for all material judgments and qualitative decisions made and options considered, and all discretions exercised which have a material bearing on the outcome of the ACCC's overall decision.

3.7 Public forum and consultation

Any interested party who wishes to comment on the ACCC's draft decision may request a public forum within two weeks of the release of the draft decision.

If the ACCC decides to hold a public forum, the forum will be held within one month of the request date.

Interested parties may make submissions following the release of the draft decision and the public forum.

Submissions must be provided within six weeks of the release of the draft decision or, if a public forum is held, two weeks after the forum.

3.8 Final decision

The ACCC will release the final decision on the application by 1 May of the final year of the regulatory period.

The process and timetable may be adjusted by the ACCC where the process is not prescribed by the code and the particular circumstances justify a departure.

4 Asset base

4.1 Introduction

This section sets out the ACCC's decision on the calculation of the RAB at the end of the regulatory period.

4.2 Lock in

The ACCC's preferred approach to asset valuation will be to lock in the RAB. This approach involves locking the value of the opening asset base of the prior regulatory period but adjust for inflation and depreciation, and assess capex incurred during the regulatory period on the basis of the capex regulatory arrangements set out in chapter 5.

The ACCC recognises that the code provides the discretion to revalue assets and hence, if TNSPs propose a revaluation, the ACCC will consider the proposal on its merits having regard to all relevant matters at that time. The onus is on the TNSP to make a case for departing from the preferred principle of locking in the asset base. If it were to consider revaluing the asset base, the ACCC's preference would be to reopen the entire valuation and consider every element of the asset base.

5 Incentive framework for capital expenditure

5.1 Introduction

This section sets out the ACCC's proposed approach with respect to the treatment of capital expenditure.

5.2 Capital expenditure framework

The ACCC proposes to adopt capital expenditure incentives focused, as far as possible, on the determination at the start of the regulatory period of an efficient level of capex for the duration of the regulatory period. The proposed incentive design consists of the following elements:

- an ex ante allowance: this will cover most or all expected investments during the regulatory period and will establish an allowance on the level of investment during the regulatory period to be included in the regulatory asset base at the end of that period.

- an excluded projects provision: this will cover very large and uncertain investments.

5.3 Ex ante capex allowance

The ex ante capex allowance should cover most or all expected investment during the period of a regulatory control, including discretionary investment not related to statutory reliability obligations. The allowance will be determined on the basis of a probabilistic assessment of expected investments during the regulatory period. However, the allowance does not entail project-specific approval and although an expected project may have been included in the determination of the allowance, this does not oblige the TNSP to develop that project during the regulatory period.

TNSPs will propose the form of the allowance best suited to their circumstances. It is expected that in most cases the allowance will reflect the change in total investment in response to a change in the main investment drivers. TNSPs will be required to provide quantified analysis of the relationship between any cost drivers (such as growth in peak demand) and the resulting investment requirement. The proposals would also need to establish how the relevant parameters would be measured and audited.

In respect of investments covered by the ex ante capex allowance, the calculation of the closing RAB at the end of the regulatory period will be the written down value of the actual investment in that period that complies with the requirements of the code.

5.4 Excluded investment

The ACCC proposes to exclude a project from the main ex ante capex allowance if the expected error presented by the inclusion of that project in the main allowance—quantified in terms of the revenue required to cover depreciation and the return on investment in that project—is equal to more than 10 per cent of the revenue required to

cover depreciation and return on investment of all projects included in the calculation of the main ex ante capex allowance.

The TNSP can apply to the ACCC for specific projects to be excluded from the ex ante allowance, even where this value threshold is not satisfied. It will be at the ACCC's discretion as to whether these projects will be considered as excluded projects.

Projects excluded from the ex ante capex allowance must be linked to unique investment drivers—such as a major point load or expected power station—rather than to general investment drivers (such as expectations of load growth within a region).

Determination of the allowed investment in excluded projects will occur during the regulatory period, once the probability of the project and its expected costs become known with greater certainty, but before investment is committed.

At the end of the excluded project incentive period the depreciated value of the actual investment in the excluded project that complies with the requirements of the code will be included in the RAB.

5.5 Arrangements applicable to separate network planners and owners

The ACCC proposes to set an ex ante allowance for those businesses which own, operate and maintain the transmission network in Victoria. However, as these businesses are not responsible for augmenting the transmission network, the ACCC does not propose to exclude any projects from the allowance.

VENCorp's revenue cap will continue to be set by the ACCC with reference to its operating budget and the likely augmentations required for the efficient operation of the Victorian network.

6 Incentive framework for operating and maintenance expenditure

6.1 Introduction

This section sets out the ACCC's general approach to providing incentives on the TNSP to reduce its operating and maintenance expenditure.

6.2 Determining the expenditure allowance

The ACCC will continue its current practice of relying primarily on historic and forecast expenditures for the TNSP in question in each revenue cap decision.

To facilitate greater use of benchmarking data in determining the opex allowance to be included in a revenue cap, the ACCC intends to undertake further work in this area in close consultation with industry and user groups.

6.3 Incentives to reduce operating expenditure

Under the approach to regulation set out in this document, the incentive on TNSPs to reduce operating expenditure derives from three different factors:

a) the fact that the ACCC will not claw-back any differences between forecast and actual opex which arise during the regulatory period

b) the manner in which the ACCC makes use of information on past opex when setting future opex targets

c) the carry forward mechanism.

6.4 The carry forward mechanism

The efficiency gain or loss in a year may be expressed mathematically as:

$E_1 = F_1 - A_1$,

where A_1 is the actual operating cost for year 1 and F_1 is the regulatory target operating cost for that year.

For savings that arise in the second to fifth year of the regulatory period, the efficiency carry forward amount is calculated as:

$E_t = (A_{t-1} - A_t) - (F_{t-1} - F_t)$

where

E_t is the efficiency benefit/loss in year t
A_t, A_{t-1} is the actual operating cost for year t, t-1 respectively,
F_t, F_{t-1} is the forecast operating cost for the years t, t-1 respectively.

The efficiency benefit/loss will be carried forward for five years after the year in which the benefit/loss is incurred.

During the regulatory period in which the efficiency benefit/loss is incurred, the carry forward mechanism does not affect the annual opex allowance. The opex allowance for the next regulatory control period will be based on:

- the expected efficient costs (determined after taking into account past opex and reasons as to why future opex may be different from past opex)
- plus/minus the carry forward of the efficiency benefit/loss from the previous regulatory period.

Since the actual opex for the last year of the regulatory period will usually not be known at the time when the revenue cap is set for the next regulatory period, the carry forward of losses or gains will be incorporated through the use of a correction mechanism.

The efficiency carry forward calculation will be undertaken in such a way as to ensure inflation does not erode the value of any benefit/loss to be retained by the TNSP.

6.5 Self-insurance

The cost of self-insurance will be recognised as an operating expense subject to the implementation of appropriate administrative arrangements including:

- a board resolution to self-insure (i.e. a copy of the signed minutes recording resolution made by the board)
- confirmation that the TNSP is in a position to undertake credibly self-insurance for those events
- self-insurance details setting out the specific risks which the TNSP has resolved to self-insure
- a report from an appropriately qualified actuary or risk specialist verifying the calculation of risks and corresponding insurance premiums
- ensuring that the cost of self-insurance is recorded as an operating expense in the audited and published income statement, and thereby deducted from the calculation of attributable profits
- ensuring that a self-insurance reserve (funded by self-insurance premiums charged in the income statement) is established in the audited and published balance sheet
- ensuring that when a claim against self-insurance is made, that an appropriate deduction to the self-insurance reserve is recorded.

7 Reopening the revenue cap

7.1 Introduction

This section sets out the ACCC's decision on taking account of events that could significantly alter the allowed efficient investment level.

7.2 Reopening the revenue cap

To take account of events that could significantly alter the allowed efficient investment level, the ACCC believes there should be provision for the revenue cap to be reopened during the regulatory period. In some circumstances the ACCC would consider passing the cost of the event through without reopening all aspects of the revenue cap.

Only TNSPs would be able to propose that the revenue cap be reopened. There is no proposed limitation as to the nature of the event that could give rise to a reopening of the cap.

However reopening the revenue cap would be conditional on:

- the TNSP being materially adversely affected by the event
- the event being beyond the firm's control
- the event not having been contemplated at the time the revenue control decision was made
- the benefits of revoking the revenue control outweighing the detriment to the TNSP's customers from revoking the control.

Finally it should be recognised that at present the revenue cap can only be reopened in limited circumstances. These circumstances do not include those envisaged in this section. Therefore a code change will be needed to give full effect to the reopening provisions specified here.

8 Weighted average cost of capital

8.1 Introduction

This section sets out the ACCC's view on each of the parameters in the WACC.

The ACCC will continue to establish the WACC on the basis of benchmark parameters to enhance certainty in investments. In saying this, the ACCC will also undertake further review and monitoring in this area with close consultation with industry and user groups. The ACCC also proposes to continue with exercising judgment in its application of empirical evidence from the market. The ACCC reserves the right to change the value of the WACC parameters with refinement in the methodology and data and in light of new available data.

The WACC is expressed as the weighted average of the return on equity and the return on debt:

WACC	=	$r_e\ (E/V) + r_d\ (D/V)$
where:		
r_e	=	*required rate of return on equity or cost of equity*
r_d	=	*cost of debt*
E	=	*market value of equity*
D	=	*market value of debt*
V	=	*market value* of equity plus debt.

8.2 Weighted average cost of capital

The ACCC will determine a WACC that provides a fair and reasonable rate of return applicable to TNSPs.

8.3 Capital asset pricing model

The ACCC will use the CAPM to estimate the cost of equity capital. As illustrated in the following formula, CAPM yields the required expected return on equity given the return on the market portfolio, the market's own volatility and the systematic risk of holding equity in the particular company:

re	=	$r_f + \beta_e\ (r_m - r_f)$
where:		
r_f	=	*expected risk free rate of return over the period*
$(r_m - r_m)$	=	*expected market risk premium (MRP), defined by the expected premium of return of the market (rm) as a whole over the risk free return for the same period*
βe	=	*a measure of investors' perceived systematic risk of the individual company's equity relative to the market.*

8.4 Risk free rate

Term to maturity of risk free rate

The ACCC will use a 10-year government bond rate as a proxy for the risk free rate.

Length of period used in moving average of bond rate

The ACCC will accept the period used to calculate the moving average of the risk free rate (between 5 and 40 days) submitted by a TNSP in its application.

8.5 Market risk premium

The ACCC will use a value of 6 per cent for the MRP in its TNSP revenue cap decisions.

8.6 Equity beta

The ACCC will apply an equity beta of 1.

8.7 Cost of debt

In determining the cost of debt the ACCC will use a 10 year government bond rate as a proxy for the risk free rate and proposes to calculate a benchmark debt margin, corresponding to a 10 year term and a benchmark 'A' credit rating for a TNSP. This would be subject to the practical application of available benchmark data on long dated Australian corporate bonds.

8.8 Gearing

The ACCC will maintain the use of a gearing level at 60 per cent for a benchmark TNSP.

8.9 Gamma

The ACCC will use an average gamma of 0.5.

8.10 Debt and equity raising costs

The ACCC will treat debt and equity raising costs as opex items and will undertake a further review of debt and equity raising costs and hedging costs.

9 Financial indicators

9.1 Introduction

This chapter sets out the ACCC's use of financial indicators when setting a revenue cap. A financial indicator is a measure of a TNSP's financial viability and ability to obtain credit.

9.2 Financial indicators

In general the ACCC will use the following financial indicators, compared to the key indicators used by Standard & Poor's, to assess the effect of revenue cap decisions on the financial viability of TNSPs:

- EBIT to revenues (per cent)
- EBITD to revenues (per cent)
- EBIT to funds employed (per cent)
- EBIT to regulated assets
- pre-tax interest cover
- funds flow net interest cover
- internal financing ratio
- gearing
- payout ratio.

Appendix A Information requirements

A.1 Introduction

This Appendix A sets out the additional information that a TNSP should include in its revenue cap application with respect to:

- asset base roll forward
- past capital expenditure
- forecast capital expenditure
- operating and maintenance expenditure
- weighted average cost of capital.

A.2 Asset base roll forward

a) For revenue cap resets, the TNSP should prepare a schedule that rolls forward its asset values from the date of the last revenue cap decision to the end of the current regulatory control period.

b) The roll forward schedule should set out the following:

   - opening asset values at the start of the current regulatory control period broken down into individual asset classes
   - forecast and actual capex broken down into the same asset classes
   - forecast and actual disposals broken down into the same asset classes
   - forecast depreciation broken down into the same asset classes
   - actual CPI adjustment for each asset class
   - closing asset values for each asset class at the end of the current regulatory period.

A.3 Past capital expenditure

a) For revenue cap resets, the TNSP should provide:

   - information on actual capex projects undertaken over the course of the current regulatory control period
   - a comparison between the actual capex projects built in the regulatory control period and those forecast in the revenue cap decision
   - an explanation for any variations between forecast and actual expenditure.

b) In relation to:

- augmentations that:
  - — exceed $10 million, the TNSP should supply the regulatory test applications
  - — cost between $1 and $10 million, the TNSP should provide the annual planning report which sets outs its regulatory test assessments of these projects
- replacement/refurbishment capex, the TNSP should provide details on:
  - — its overall asset management processes and procedures
  - — how its individual investment decisions fit within this strategy
- large replacement projects (that is, projects exceeding $10 million), the TNSP should provide an explanation as to why the asset needed replacing (including comprehensive condition based assessments)
- business support capex (for example, information technology and communications), the TNSP should provide a comprehensive and robust assessment of the need for these investments (including a business case showing the analysis undertaken to support the investment).

A.4 Forecast capital expenditure

a) Introduction

In contrast to an ex-post capex regime, an ex-ante regime places greater emphasis on conducting a rigorous review of forecast investment before the investment is undertaken. This increases the information required in a TNSP's revenue cap application.

b) The TNSP should include in its revenue cap application a clear statement outlining:

- expected investment
- the factors affecting the need for the investment.

c) The forecast capex costs should be rigorous and as accurate as possible. Where forecasts cannot be supplied to a precise standard, this should be highlighted and an explanation provided.

d) In relation to reliability augmentations, the TNSP should categorise its investments into the following groups:

- projects under construction
- projects very likely to be built
  - — possible projects (not identified above).

e) In relation to each forecast project, the TNSP should provide:

- a detailed description of the project
- (the regulatory test application (if one has been conducted)
- details on why the project is required
- the timing and costs of the project (and how these were derived)
- details on the options considered in addition to the preferred option (including the estimated cost of the alternative options considered)
- the methodology and analysis used to select the preferred option.

f) In relation to projects that are neither under construction at the time of the revenue cap application nor very likely to be built, the TNSP should provide details on:

- the methodology used to forecast these projects (including their estimated cost)
- any scenario modelling utilised in developing the TNSP's forecast capex plans.

g) In relation to replacement/refurbishment capex, the TNSP should provide details on:

- its overall asset management processes and procedures
- how its individual investment decisions fit within this strategy.

h) In relation to large replacement projects (that is, projects exceeding $10 million), the TNSP should provide an explanation as to why the asset needs replacing (including comprehensive condition based assessments).

- In relation to business support capex (for example, information technology and communications), the TNSP should provide a comprehensive and robust assessment of the need for these investments (including a business case showing the analysis undertaken to support the investment).

A.5 Operating and maintenance expenditure

a) The TNSP should provide:

- its actual opex spend (historical) over the first four years of the current regulatory control period
- a reasonable forecast of the opex spend for the final year of the current regulatory control period
- the assumptions on which its opex forecasts are based
- full and detailed explanations of the basis for its preparation of its opex forecasts

- if the opex classification (or allocation framework) has changed during the current regulatory control period:
  - an explanation of the change
  - the historical annual opex presented using both the old classification and the new classification methodologies.

b) To assist the ACCC in the consideration of partial indicator (ratio) analysis of opex, the TNSP should provide measures of its:

- line length (circuit kilometres)
- number of substations
- energy delivered (Gigawatt hour)
- energy demand (megawatt).

c) If the TNSP is requesting a self-insurance allowance as part of its revenue cap, it should address the self-insurance guidelines as set out in chapter 6.

Appendix B Transitional capital expenditure arrangements

B.1 Introduction

The ACCC will apply the ex-post prudency test for investment during the first revenue control period in assessing the amount of capex out-turn to be rolled-into the RAB. The ACCC for subsequent revenue caps will apply an ex-ante framework. In assessing the amount of capex that should be rolled-into the RAB, the ACCC is guided by the principle that consumers only pay for prudent investment and that TNSPs meet their statutory obligations.

B.2 Prudency-test

The ACCC will assess the prudency of actual capital expenditure subject to S5.1 of the *Draft statement of principles for the regulation of transmission revenues*, May 1999, which outlines the test for prudent investment, ' ...the amount that would be invested by a prudent TNSP acting efficiently in accordance with good industry practice'.

The ACCC will apply the prudency test to augmentation investment which has been assessed under the Regulatory Test, and to projects that have not been subjected to the Regulatory Test, by following a three stage process.

B.3 Regulatory test

The ACCC is not expressly bound to accept the outcome of the Regulatory Test as the definitive statement on the amount to be rolled-in to the RAB. Nevertheless, the ACCC has adopted the Regulatory Test as the starting point for assessing the prudency of TNSP's capex.

B.4 Application of prudency test

First, assess whether there is a justifiable need for the investment. This stage examines whether the TNSP correctly assessed the need for investment against its statutory and Code obligations. At this stage, the assessment focuses on the need for investment, without specifically focussing on what the 'correct' investment to meet that need should be. An affirmation of the need for an investment does not imply acceptance of the specific project that was developed.

Second, assuming the need for an investment is recognised, assess whether the TNSP proposed the most efficient investment to meet that need. The content of the assessment here is whether the TNSP objectively and competently analysed the investment to a standard that is consistent with 'good industry practice'.

Third, assess whether the project that was analysed to be the most efficient was indeed developed, and if not, whether the difference reflects decisions that are consistent with 'good industry practice'. The analysis in this third step examines in detail the factors that caused changes in the project design and/or delivery and assesses how the TNSP

responded to those factors in comparison to what could be expected of a prudent operator.

The ACCC will apply the prudency test to ‘non-augmentation’ and ‘support the business’ investment by reviewing the processes conducted by the TNSP in assessing the need for investment, selecting the appropriate project and then delivering that project.